

**EXHIBIT 1**  
**(McCann Deposition Transcript)**



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2 I N D E X  
3 - - -  
4

Testimony of:

5  
CRAIG J. McCANN, Ph.D., CFA

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1 I'm going to hold onto it.

2 MR. MOUGEY: That sounds  
3 good.

4 BY MS. McENROE:

5 Q. To make things a little bit  
6 easier, what we've done is for Exhibit 3,  
7 we've bound together your original report  
8 from March 25th -- and I'll hand this to  
9 you in a minute so you can look at it,  
10 with one addition.

11 We swapped in what I think  
12 you referred to as an errata page, at  
13 Page 35?

14 A. Yes.

15 Q. And then we included behind  
16 a blue slip sheet the first supplemental  
17 report that was submitted on April 3,  
18 2019, without any of the attachments or  
19 exhibits. And then behind the next blue  
20 slip sheet, the April 15th supplemental  
21 report. Okay?

22 Do you see that?

23 A. Thank you. Yes.

24 (Document marked for

1 identification as Exhibit

2 McCann-3.)

3 BY MS. McENROE:

4 Q. We're going to mark that as  
5 Exhibit 3.

6 And today, if we're  
7 referring -- today or tomorrow, if we're  
8 referring to paragraphs and whatnot, in  
9 any of the reports you've submitted, it's  
10 probably easiest if we refer to this  
11 version. But if you do want any of the  
12 appendices or exhibits for completeness,  
13 we can definitely arrange that. All  
14 right?

15 A. Thank you. Thank you.

16 Q. So take a quick second and  
17 look at that with me, just to make sure  
18 that we are speaking the same language  
19 here.

20 So the first cover sheet is,  
21 as I said, the March 25th report, the  
22 original report that you submitted,  
23 correct?

24 A. Yes.

1 Q. Okay. And you didn't -- you  
2 didn't apply any other criteria?

3 A. Not that I can think of.

4 Q. Okay. In that Paragraph 130  
5 that I just read out, you say at the  
6 beginning that you implemented various  
7 approaches. And is that talking about  
8 the approaches that are discussed later  
9 in that section, Approaches 1, 2, 3, 4  
10 and 5?

11 A. Yes.

12 Q. You are not talking about  
13 anything else than that?

14 A. Correct.

15 Q. And then you have five  
16 approaches in this report; is that  
17 correct?

18 A. Yes.

19 Q. And the first one is the  
20 maximum monthly trailing six-month  
21 threshold, correct?

22 A. Correct.

23 Q. And the second is the twice  
24 trailing 12-month average pharmacy dosage

1 to do in this approach?

2 A. I'm pausing just for a  
3 second to make sure when you say, is that  
4 all, prior to the instruction that I got  
5 from counsel, I think the answer is yes.

6 Q. Paragraph 132 says, "In this  
7 approach and the others implemented  
8 below" -- just pausing there for a  
9 second. The others implemented below are  
10 the rest of the five approaches in this  
11 Section 9; is that correct?

12 A. Yes.

13 Q. So it says, "In this  
14 approach, and the others implemented  
15 below, I have been asked by counsel to  
16 assume that the distributor did not  
17 effectively investigate the flagged  
18 transactions, and so every subsequent  
19 transaction of that drug code is also  
20 flagged because the distributor had an  
21 unfulfilled obligation to detect and  
22 investigate the first flagged  
23 transaction."

24 Is that assumption made in



1 Paragraph 132 also from direction of  
2 counsel?

3 A. Yeah, so I might shorten  
4 that sentence up a great deal, because  
5 there's some of that sentence that's not  
6 necessary to describe our implementation.

7 Q. Explain to me what you mean  
8 by that.

9 A. Well, as it's written, as I  
10 wrote it --

11 Q. Yeah.

12 A. -- I said counsel asked me  
13 to assume that the distributor did not  
14 effectively investigate the flagged  
15 transactions. And so every subsequent  
16 transaction of that drug code is also  
17 flagged because the distributor had an  
18 unfulfilled obligation to detect and  
19 investigate the first flagged  
20 transaction.

21 Operationally, you could  
22 condense that to just say, I was asked to  
23 flag every subsequent transaction after  
24 the first transaction is flagged. It

1 doesn't need the rest of the context to  
2 describe the calculation that I did.

3                   It's there because I'm sort  
4 of describing my understanding, but it's  
5 not necessary to describe the  
6 calculations. Just if you hit a flag,  
7 everything after that is flagged. And  
8 some other witness will deal with whether  
9 there was effective due diligence and  
10 whether in the absence of that there was  
11 an ongoing duty that should trigger a  
12 flag on all the subsequent transactions.

13               Q.     Is it your assertion after  
14 the because -- so where it says -- you  
15 know, it says the first part that you  
16 were just reading, and then it says,  
17 "Because the distributor had an  
18 unfulfilled obligation to detect and  
19 investigate the first flagged  
20 transactions."

21                   Is that coming from you or  
22 is that coming from plaintiffs' counsel,  
23 the reasoning of the because?

24               A.     It's coming from the

1 plaintiffs' counsel. I don't -- you  
2 know, I was asked to assume everything  
3 that's in that sentence, including that  
4 last clause that you've read.

5 Q. And just so I make sure that  
6 I understand, that assumption -- that is,  
7 flagging every subsequent transaction for  
8 that specific drug after you have a  
9 flagged transaction -- you apply across  
10 all five of the methodologies or  
11 approaches used in Section 9; is that  
12 correct?

13 A. Correct.

14 Q. For every distributor, for  
15 each of the drugs that you use or  
16 manufacture as appropriate for the second  
17 supplemental report?

18 A. Correct.

19 Q. So that I understand and  
20 make sure we're totally clear. You have  
21 a methodology that you explain here in  
22 Paragraph 131 regarding the maximum  
23 monthly trailing six-month threshold; is  
24 that correct? We were just talking about

1     your March 25th report, in particular, to  
2     Paragraphs 181, 182, and 183, which are  
3     towards the end at Page 93 to 94. Let me  
4     know when you're there.

5             A.     I'm there.

6             Q.     And this section is labeled  
7     "Conclusion," correct?

8             A.     Yes.

9             Q.     And Paragraph 181 says,  
10    "Based upon my comparison of the ARCOS  
11    data produced by the DEA, the public  
12    ARCOS retail drug summary reports, and  
13    the defendants' transactional data, I  
14    conclude that -- after correcting a  
15    relatively small number of records -- the  
16    ARCOS data produced by the DEA is  
17    complete and reliable."

18                   Did I read that correctly?

19             A.     Yes.

20             Q.     That's an opinion you're  
21    advancing in this litigation?

22             A.     Yes.

23             Q.     And then Paragraph 182, "I  
24    further conclude that Cardinal Health's

1 transactional" -- "transaction records  
2 produced in discovery are a reliable  
3 source of transactions data before 2006  
4 and after 2014. More generally, with the  
5 exception of AmerisourceBergen, the other  
6 defendants' transaction data is also a  
7 reliable source of transaction data for  
8 the periods covered by its production."

9 Did I read that correctly?

10 A. Yes.

11 Q. And that's an opinion that  
12 you're advancing in this litigation?

13 A. Yes.

14 Q. Paragraph 183, "The ARCOS  
15 data can be used to identify transactions  
16 in a state, county, zip code, or  
17 individual pharmacy meeting certain  
18 criteria as I have illustrated above."

19 Did I read that correctly?

20 A. Yes.

21 Q. And that's an opinion that  
22 you're advancing in this litigation?

23 A. Yes.

24 Q. Are you advancing any other

1 legitimate intended uses to illicit  
2 activities.

3 Q. Do you agree that diversion  
4 is a crime?

5 A. I have no -- no opinion --

6 MR. MOUGEY: Objection.

7 Outside the scope.

8 THE WITNESS: -- one way or  
9 the other.

10 BY MR. EPPICH:

11 Q. Are you planning to offer  
12 any opinions about whether or not any of  
13 the defendants diverted prescription  
14 opioids in this litigation?

15 A. No.

16 Q. I'd like to turn back to  
17 Page 56 of your report. Page 56 is the  
18 start of Section 9, transaction analysis,  
19 you'll recall.

20 I'd like to return to the --  
21 the five methodologies that you implement  
22 to identify what you call flagged orders.  
23 Okay?

24 A. Yes.

1 BY MR. EPPICH:

2 Q. Now, you say that your  
3 methodology flags orders, correct?

4 A. Yes.

5 Q. If the distributors had  
6 refused to ship each of your flagged  
7 orders, would any legitimate  
8 prescriptions have gone unfilled?

9 MR. MOUGEY: Objection.

10 THE WITNESS: I don't know.

11 BY MR. EPPICH:

12 Q. Are you planning to offer  
13 any opinions in this case as to whether  
14 or not distributors' refusal to ship  
15 would result in any legitimate  
16 prescriptions having gone unfilled?

17 MR. MOUGEY: Objection.

18 THE WITNESS: Not as I sit  
19 here.

20 BY MR. EPPICH:

21 Q. Now, if the distributors had  
22 refused to ship each of your flagged  
23 orders, would that have prevented the  
24 opioid crisis?

1 MR. MOUGEY: Objection.

2 THE WITNESS: I have no  
3 idea. No opinion one way or the  
4 other.

5 BY MR. EPPICH:

6 Q. And do you plan to offer any  
7 opinions about whether or not  
8 distributors play a role or played a role  
9 in causing or preventing the opioid  
10 crisis?

11 MR. MOUGEY: Objection.

12 THE WITNESS: No. As with a  
13 lot of this stuff, that's going to  
14 be the subject of other experts'  
15 reports and testimony.

16 BY MR. EPPICH:

17 Q. Now, you used ARCOS data for  
18 your methodologies, correct?

19 MR. MOUGEY: Objection.

20 THE WITNESS: Along with  
21 other data. But, yes, I used  
22 ARCOS data.

23 BY MR. EPPICH:

24 Q. And you understand that



1           A.       Section 10 doesn't deal with  
2   individual shipments from distributors to  
3   pharmacies.  It's at a higher, more macro  
4   level, describing the shipments into  
5   Ohio, and into Cuyahoga and Summit, and  
6   how those exceed the two example  
7   baselines that I created.

8           Q.       Yes.  And earlier you -- you  
9   explained what the -- what you meant by  
10   excessive shipments.  And so I'm asking  
11   you, of these excessive shipments, which  
12   of them should distributors have not  
13   shipped to pharmacies?

14          A.       I don't have an opinion one  
15   way or another beyond what's expressed in  
16   Section 10 on that topic.

17          Q.       Were any of what you  
18   called -- call excessive shipments  
19   diverted?

20          A.       I don't know.

21          Q.       You can't point to any of  
22   your excessive shipments that were  
23   diverted?

24                   MR. MOUGEY:  Objection.

1           Outside the scope.

2                   THE WITNESS:   And it's just  
3           mischaracterizing what I did in  
4           Section 10.   I'm not identifying  
5           individual transactions in  
6           Section 10.

7                   I'm just saying at a macro  
8           level, the amount of MME per  
9           capita shipped into Cuyahoga and  
10          Summit went up by a factor of  
11          eight or ten, and then came back  
12          down by nearly 50 percent, and  
13          I've explained how that dramatic  
14          increase exceeds some gradual  
15          growth from the earlier levels to  
16          the later levels.

17   BY MR. EPPICH:

18                  Q.     Do you plan to offer any  
19   opinions in this case as to whether or  
20   not the excessive shipments that are  
21   represented in your report in Section 10  
22   were diverted?

23                  A.     No.

24                  Q.     Your 1997 baseline, you



1           IN THE UNITED STATES DISTRICT COURT  
2                   FOR THE NORTHERN DISTRICT OF OHIO  
3                           EASTERN DIVISION

- - -

3       IN RE:    NATIONAL                                 :   HON. DAN A.  
4       PRESCRIPTION OPIATE                             :   POLSTER  
5       LITIGATION   :   MDL NO. 2804

6       This document relates to:                         :   Case No. 17-MD-2804

7       The County of Summit, Ohio                       :   :  
8       Ohio et al. v. Purdue Pharma                    :   :  
9       L.P., et al., Case No.                           :   :  
10      17-OP-45004                                       :   :

11      The County of Cuyahoga v.                       :   :  
12      Purdue Pharma Purdue Pharma                    :   :  
13      L.P., et al., Case No.                           :   :  
14      18-OP-45090                                       :   :

- - -

15                   Friday, May 10, 2019  
16                           Volume II

- - -

17   HIGHLY CONFIDENTIAL - SUBJECT TO FURTHER  
18                   CONFIDENTIALITY REVIEW

- - -

19                   Videotaped deposition of  
20   CRAIG J. MCCANN, Ph.D., CFA, taken pursuant  
21   to notice, was held at the law offices of  
22   Morgan Lewis & Bockius, 1111 Pennsylvania  
23   Avenue, NW Washington, DC 20004, beginning  
24   at 9:08 a.m., on the above date, before  
25   Amanda Dee Maslynsky-Miller, a Certified  
26   Realtime Reporter.

- - -

27                   GOLKOW TECHNOLOGIES, INC.  
28           877.370.3377 ph | 917.591.5672 fax  
29                   deps@golkow.com

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1                   In charts like the charts in  
2   Figure 11, Figure 12, where you're  
3   looking at all transactions for the time  
4   period, you can't tell how many of those  
5   transactions shipped from a Walgreens  
6   distribution center to a Walgreens  
7   pharmacy, correct?

8                   A.     Not from the figures.

9                   Q.     All right. I'm going to  
10   hand you what I'm going to mark as  
11   Exhibit-12.

12                                 -   -   -

13                                 (Whereupon, Exhibit  
14                   McCann-12, Excerpted Appendix 9 of  
15                   C. McCann Report, was marked for  
16                   identification.)

17                                 -   -   -

18   BY MS. SWIFT:

19                   Q.     This one is going to be sort  
20   of similar to Exhibit-11.

21                                 Exhibit-12 is an excerpted  
22   large binder of documents from your  
23   Exhibit-9. And what we did was the same  
24   thing, we pulled out the pages that



1 related to my client, which is Walgreens.

2 Do you recognize that chart  
3 on the first page of Exhibit-12 as a  
4 chart from your Exhibit-9?

5 A. Yes.

6 I'm sorry, this Exhibit-9 is  
7 4,000 pages. I don't recognize --

8 Q. You don't recognize this  
9 particular one?

10 A. -- this particular chart.  
11 But I recall charts that look exactly  
12 like this.

13 Q. You included -- you say in  
14 your report that Exhibit-9 is a set of  
15 charts and reports too voluminous to  
16 include in the body of the report,  
17 correct, sir?

18 A. Yes.

19 Q. And if you're -- just to see  
20 the description of Exhibit-9 in your  
21 report, it's Page 89, Paragraph 161.

22 This section of your report,  
23 it's Section 11, charts and reports,  
24 walks through the variety of reports and

1 charts that are included in Appendix 9,  
2 correct, sir?

3 A. Yes.

4 Q. The first several categories  
5 of charts that are included in Appendix 9  
6 are summary charts of high-level data. I  
7 haven't included all of them in our  
8 excerpt version of it.

9 But you can see from the  
10 body of the report, the first example is,  
11 State hydrocodone and Oxycodone MME per  
12 capita, 1997 to 2017.

13 And there are a bunch of  
14 other high-level charts like that,  
15 correct, sir?

16 A. Yes.

17 Q. You can't tell anything  
18 about any individual distributor from  
19 charts like those high-level charts in  
20 Appendix 9, correct, sir?

21 A. Correct.

22 Q. Then if you look at  
23 Paragraph 174 of your March 25th report,  
24 that references Part G of Appendix 9,

1 - - -

2 VIDEO TECHNICIAN: Back on  
3 the record at 11:07 a.m.

4 - - -

5 EXAMINATION

6 - - -

7 BY MS. FUMERTON:

8 Q. Good morning, Dr. McCann.

9 My name is Tara Fumerton, and I represent  
10 Walmart in this action.

11 A. Good morning.

12 Q. Good morning. Right before  
13 we went on the record I marked as  
14 Exhibits-14 through 17 a series of  
15 excerpts from your Appendix 9. I'm going  
16 to ask you some questions about those in  
17 a minute, if you can set them aside.

18 Dr. McCann, do you recall  
19 yesterday that you were asked questions  
20 about whether your calculations took into  
21 consideration the fact that a certain  
22 number of opioids distributed into Summit  
23 County and Cuyahoga County was returned?

24 A. Yes.

1           Q.     And the record will reflect  
2     what you said, but I believe that you  
3     testified that you would need to verify  
4     the extent to which returns were factored  
5     into your analysis, but that in any  
6     event, returns constituted a de minimus  
7     amount of the transactions you reviewed.

8           A.     Yes.

9           Q.     Is that a fair summary of  
10    your testimony?

11          A.     Yes.

12          Q.     In a data set as large as  
13    the one that you reviewed concerning the  
14    shipments of opioids into Cuyahoga and  
15    Summit County, do you consider de minimus  
16    to be 1 percent?

17          A.     I'd have to think through  
18    the context a little bit.

19                   But in some contexts, 1  
20    percent would be de minimus and in other  
21    contexts not. And it depends on -- let  
22    me leave it at that.

23          Q.     Okay. If returns  
24    constituted about 1 percent of the total

1 amount of opioids being distributed to  
2 Cuyahoga or Summit counties, would you  
3 consider that to be 1 percent -- I'm  
4 sorry, let me --

5 A. Yes. That was the easiest  
6 question I've had so far.

7 Q. It would be. Let me  
8 rephrase.

9 If returns constituted about  
10 1 percent of the total amount of opioids  
11 being distributed into Cuyahoga and  
12 Summit counties, would you consider that  
13 to be de minimus?

14 A. In the context of my  
15 opinions, yes.

16 Q. Okay. I would like you to  
17 now look at the four exhibits that I  
18 marked. And I'm going to go through them  
19 quickly and ask you yes-or-no questions.  
20 And if you could answer yes or no, I  
21 would appreciate it, and I'm sure my  
22 colleagues would appreciate it who are  
23 waiting to get up here and ask questions,  
24 too.

1 for identification.)

2 - - -

3 (Whereupon, Exhibit

4 McCann-15, Page 3849 of Appendix 9

5 of C. McCann Report, was marked

6 for identification.)

7 - - -

8 (Whereupon, Exhibit

9 McCann-16, Page 3783 of Appendix 9

10 of C. McCann Report, was marked

11 for identification.)

12 - - -

13 (Whereupon, Exhibit

14 McCann-17, Page 3852 of Appendix 9

15 of C. McCann Report, was marked

16 for identification.)

17 - - -

18 THE WITNESS: Yes.

19 BY MS. FUMERTON:

20 Q. So Exhibit-14 is Page 3779

21 of 3877 of your Appendix 9, correct?

22 A. Yes.

23 Q. And on that page, you

24 provide an analysis, by MME, of the total

1     opioids distributed into Cuyahoga County  
2     by company, correct?

3             A.     Correct.

4             Q.     You conclude that Walmart's  
5     market share of the total opioids  
6     distributed into Cuyahoga County by MME  
7     is 1.28 percent, correct?

8             A.     Correct.

9             Q.     Please turn to Exhibit-15.

10            A.     Yes.

11            Q.     This is Page 3849 of 3877 of  
12     your Appendix 9.

13                   And on this page you provide  
14     an analysis, by MME, of the total opioids  
15     distributed into Summit County by  
16     company, correct?

17            A.     Yes.

18            Q.     You conclude that Walmart's  
19     market share of the total opioids  
20     distributed into Summit County by MME is  
21     1.12 percent, correct?

22            A.     Correct.

23            Q.     Can you please turn to  
24     Exhibit-16?

1 A. Yes.

2 Q. And this is Page 3783 of  
3 3877 of your Appendix 9.

4 And on this page, you  
5 provide an analysis by dosage units of  
6 the total opioids distributed into  
7 Cuyahoga County by company, correct?

8 A. Yes.

9 Q. You conclude that Walmart's  
10 market share of the total opioids  
11 distributed into Cuyahoga County by  
12 dosage units is 2.17 percent, correct?

13 A. Yes.

14 Q. Turn to Exhibit-17, please.  
15 This is Page 3852 of 3877 of your  
16 Appendix 9.

17 And on this page, you  
18 provide an analysis by dosage units of  
19 the total opioids distributed into Summit  
20 County by company, correct?

21 A. Correct.

22 Q. You conclude that Walmart's  
23 market share by dosage units of the  
24 opioids distributed into Summit County is



[illegible]

2 THE WITNESS: Thank you.

3 BY MR. MATTHEWS:

4           Q.           Exhibit-19 is an excerpt  
5     from your Appendix 9, Sub-Appendix I,  
6     which I will represent to you contains  
7     data relative to distribution by Anda  
8     into Summit -- Ohio, Summit and Cuyahoga  
9     counties.

10 Do you recognize it to be

11 that?

12           A.     I don't recognize it yet to  
13    be that, but I do recognize it as pages  
14    from one of my appendices.

15 Q. Okay. I just want to make  
16 sure I understand what you're saying.

17                               So if you could turn to Page  
18    3762 of what's been marked as Exhibit-19.

19                   A.     Yes.

20 Q. The page is captioned,  
21 Opioid Total Dosage Units By Individual  
22 DEA Number in Ohio, right?

23                    A.        Yes.

24 Q. And then on the second entry

1 on the left, there's a company named  
2 Anda, Inc., right?

3 A. Correct.

4 Q. And you notice that you  
5 distinguish between Anda Pharmaceuticals,  
6 Inc. and Anda, Inc.

7 Do you see that?

8 A. Yes.

9 Q. Why did you do that?

10 A. For purposes of this report,  
11 the report is by DEA number, and so it  
12 includes both of those DEA numbers and  
13 the reporter name from the ARCOS data we  
14 received.

15 Q. Okay. So according to this,  
16 if I understand it correctly, Anda, Inc.,  
17 meaning -- the Anda, Inc. total  
18 percentage of opioids distributed into  
19 Ohio during the relevant time period, as  
20 a total of all opioids, was .87 percent,  
21 right?

22 A. No, not necessarily. During  
23 the time period covered by this report,  
24 which is the public -- the ARCOS data I

1 received, that would be a true statement.

2 Q. Right. So during the  
3 relevant time period analyzed by you in  
4 connection with this report, Anda, Inc.,  
5 including Anda, Inc. total -- Anda  
6 Pharmaceuticals, Inc., and Anda, Inc.,  
7 the total of their market share is .87  
8 percent, right?

9 A. No. You're still not  
10 describing the report accurately, I don't  
11 think.

12 The relevant time period is  
13 broader than, as I understand it, 2006 to  
14 2014. If by relevant time period that's  
15 shorthand for you for 2006 to 2014, then  
16 I agree with your statement.

17 Q. Okay. From now on, that's  
18 what I mean.

19 A. Okay.

20 Q. You, your report.

21 You're telling us that Anda,  
22 Inc., meaning Anda Pharmaceuticals, Inc.  
23 and Anda, Inc. collectively, distributed  
24 .87 percent of all opioids into Ohio

1 during the period covered by your report?

2 A. I'm sorry, Mr. Matthews,  
3 you're still not saying that right.

4 My report covers a longer  
5 time period, including for Anda, Inc. So  
6 you can't say in my report Anda, Inc.'s  
7 market share is .87, unless you're  
8 referring only to this page and only to  
9 this time period, which is not the time  
10 period covered by my report.

11 Q. And the time period is --  
12 why don't you tell me again, what's the  
13 time period?

14 A. It covers from -- there's  
15 data in my report from 1997 to 2018,  
16 maybe 1996 or 1997 to 2018.

17 Q. And that's the period that's  
18 covered here?

19 A. "Here" being what?

20 Q. On Page 3762.

21 A. No. This is the ARCOS time  
22 period of 2006 to 2014.

23 Q. All right. And for that  
24 same period, Anda Pharmaceuticals, Inc.,

1 distributed .67 percent of the opioids  
2 distributed in Ohio, right?

3 A. At least according to the  
4 ARCOS data, correct.

5 Q. And what you're telling me  
6 is, according to the ARCOS data during  
7 this same time period, Anda, Inc.  
8 distributed .20 percent of the opioids  
9 into Ohio?

10 A. At least as identified as  
11 the reporter name in ARCOS.

12 Q. Turn to Page 3788.

13 You'll agree this is  
14 captioned, Opioid Total Dosage Units By  
15 Individual DEA Number into Cuyahoga  
16 County, right, Ohio?

17 A. Yes.

18 Q. And so if you look down in  
19 the left column, the second entry is,  
20 Anda, Inc. total, right?

21 A. Correct.

22 Q. And according to this, if  
23 I'm reading it correctly, Anda, Inc.  
24 alone distributed .54 percent of all of

1 the opioids distributed into Cuyahoga  
2 County for the time reported on this  
3 page, right?

4 A. At least by buyer name in  
5 the ARCOS data, correct.

6 Q. And Anda Pharmaceuticals,  
7 Inc. distributed .27 percent of all  
8 opioids distributed into Ohio -- Cuyahoga  
9 County, Ohio, during the time period  
10 reflected on this page?

11 A. At least as identified in  
12 the ARCOS data I received, yes.

13 Q. And collectively what you  
14 refer to as Anda, Inc., total it's .81  
15 percent, right?

16 A. Correct.

17 Q. If you could just turn to  
18 Page 3856.

19 This is captioned, Opioid  
20 Total Dosage Units By Individual DEA  
21 Number in Summit County, Ohio, right?

22 A. Yes.

23 Q. And looking at this, the  
24 first entry is Anda -- or the Anda

1 companies, right?

2 A. Yes.

3 Q. And so as I understand this,  
4 for the time period reflected in this  
5 exhibit, Anda, Inc., standing alone,  
6 distributed .07 percent of all opioids  
7 distributed into Summit County, Ohio,  
8 right?

9 A. At least as identified as  
10 the seller name in the ARCOS data I  
11 received.

12 Q. And Anda Pharmaceuticals,  
13 Inc. distributed .60 percent of all  
14 opioids distributed into Summit County,  
15 Ohio, in the time period reflected on  
16 this exhibit, right?

17 A. At least as identified by  
18 the seller name in the ARCOS data I  
19 received.

20 Q. And, collectively, Anda  
21 Pharmaceuticals and Anda, Inc.  
22 distributed .67 percent of all the  
23 opioids distributed into Summit County,  
24 correct?

1           A.       At least as identified by  
2     the seller name in the ARCOS data I  
3     received.

4                   MR. MATTHEWS:   Thanks, Dr.  
5           McCann.   I have many more  
6           questions, but my colleagues won't  
7           let me ask them.   So I'm finished.

8                   THE WITNESS:   Thank you very  
9           much.

10                   VIDEO TECHNICIAN:   Off the  
11           record at 11:39 a.m.

12                               -   -   -

13                               (Whereupon, a discussion off  
14           the record occurred.)

15                               -   -   -

16                   VIDEO TECHNICIAN:   We're  
17           back on the record at 11:44 a.m.

18                               -   -   -

19                               EXAMINATION

20                               -   -   -

21     BY MR. McDONALD:

22                   Q.       Dr. McCann, my name is John  
23     McDonald, and I represent Henry Schein,  
24     Inc. and Henry Schein Medical Systems,



1                   And for Henry Schein, it's a  
2   short list. For other defendants, it  
3   would be a much larger one.

4                   Q.     And for my client, it's  
5   completely blank for every one of the  
6   five flagging methods for every  
7   transaction, correct?

8                   A.     Right. Because it appears  
9   all -- it's not applicable because it  
10  appears that all of the buyers are  
11  practitioners.

12                  Q.     So you have no opinions in  
13  this case about my client in regard to  
14  your transactional analysis using the  
15  five flagging methods; is that right?

16                  A.     Correct.

17                  Q.     And that's because my client  
18  has no sales to chain or retail  
19  pharmacies in either Summit or Cuyahoga  
20  County?

21                  A.     And that is all that is  
22  covered in Section 9, yes.

23                  Q.     Now, you also did a market  
24  share analysis or calculations about

1 market share, correct?

2 A. Yes.

3 Q. And what was the purpose of

4 that?

5 A. To assist the court.

6 Q. To assist the court, okay.

7 Well, then, let's look at it

8 quickly for my client. Let me show you

9 what I've marked as Exhibits-21 and 22.

10 A. Thank you.

11 - - -

12 (Whereupon, Exhibit

13 McCann-21, Distributor Market

14 Share by Year for Cuyahoga County,

15 was marked for identification.)

16 - - -

17 (Whereupon, Exhibit

18 McCann-22, Distributor Market

19 Share by Year for Summit County,

20 was marked for identification.)

21 - - -

22 BY MR. McDONALD:

23 Q. And 21 is the distributor

24 market share by year for Cuyahoga County;

1 is that right?

2 A. For the period 2006 to 2014,  
3 correct.

4 Q. Okay. And you used ARCOS  
5 data for this analysis, correct?

6 A. Supplemented with individual  
7 transaction data, yes.

8 Q. All right. And, now, do you  
9 understand my client is not a defendant  
10 in Cuyahoga County?

11 A. I don't know one way or the  
12 other.

13 Q. So you just did this for  
14 everybody, whether they were a defendant  
15 or not?

16 A. Correct.

17 Q. Okay. And you see Henry  
18 Schein, Inc.'s market share.

19 And that would include  
20 Animal Health, right, since you're using  
21 them --

22 A. To the extent that Animal  
23 Health was shipping drugs in Cuyahoga,  
24 yes.

1 Q. And the market share is .05  
2 percent for these years?

3 A. Correct.

4 Q. And you would agree with me  
5 that's de minimus?

6 A. Yes.

7 Q. All right. And if you'll  
8 look at Exhibit-22, this is the same  
9 analysis for Summit County, correct?

10 A. Yes.

11 Q. And Henry Schein, Inc. is --  
12 market share is .03 percent.

13 Do you see that?

14 A. Yes.

15 Q. And you would agree with me  
16 that's de minimus?

17 A. Yes.

18 MR. McDONALD: That's all  
19 the questions I have. Thank you.

20 VIDEO TECHNICIAN: Off the  
21 record at 11:57 a.m.

22 - - -

23 (Whereupon, a discussion off  
24 the record occurred.)

1 MME by Company in Cuyahoga County, Ohio;  
2 is that correct?

3 A. Yes.

4 Q. All right. And as part of  
5 your work for the plaintiffs, you  
6 prepared this chart that you contend  
7 represents the opioid total MME by  
8 company in Cuyahoga, correct?

9 A. Correct.

10 Q. All right. And this covers  
11 the time period from 2006 through 2014;  
12 is that correct?

13 A. Yes.

14 Q. On this chart that's marked  
15 as Exhibit-14, what percentage of the  
16 market share of total opioid MMEs in  
17 Cuyahoga County did you attribute to H.D.  
18 Smith?

19 A. 1.18 percent.

20 Q. And you believe that number  
21 is accurate?

22 A. I do.

23 Q. If you could, sir, flip to  
24 the document that was previously marked

1 as Exhibit-16.

2 A. Yes.

3 Q. This is another chart that  
4 you prepared for plaintiffs that is  
5 entitled, Opioid Total Dosage Units by  
6 Company in Cuyahoga County, Ohio; is that  
7 correct?

8 A. Yes.

9 Q. And, again, this Exhibit-16  
10 refers to the time period between 2006  
11 and 2014, correct?

12 A. Yes.

13 Q. On Exhibit-16, what  
14 percentage of market share, based on  
15 total opioid dosage, did you -- dosage  
16 units did you attribute to H.D. Smith?

17 A. .56 percent.

18 Q. Mr. McCann, let's refer to  
19 what's previously marked as Exhibit-15.

20 And this is another chart  
21 that you prepared for plaintiffs that is  
22 entitled, Opioid Total MME by Company in  
23 Summit County, Ohio; is that correct?

24 A. Yes.

1           Q.     And, again, this covers the  
2     time period from 2006 through 2014,  
3     correct?

4           A.     Yes.

5           Q.     On this chart that's now  
6     marked as Exhibit-15, what percentage of  
7     total opioid MMEs in Summit County did  
8     you attribute to H.D. Smith?

9           A.     .01 percent.

10          Q.     And do you believe that  
11     number is accurate?

12          A.     Yes.

13          Q.     With regard to -- I think I  
14     skipped over this, sir.

15                     With regard to Exhibit-16,  
16     you had said that the market share that  
17     you attributed to H.D. Smith was .56  
18     percent.

19                     Do you believe that number  
20     is accurate?

21          A.     Yes.

22          Q.     If you would, sir, please  
23     refer to Exhibit-17.

24                     And Exhibit-17 is another

1 chart that you had prepared for the  
2 plaintiffs in this litigation that's  
3 entitled, Opioid Total Dosage Units by  
4 Company in Summit County, Ohio; is that  
5 correct?

6 A. Yes.

7 Q. And this is another document  
8 that's from Appendix 9 to your report?

9 A. Yes.

10 Q. And Exhibit-17 covers that  
11 same time period from 2006 through 2014,  
12 correct?

13 A. Yes.

14 Q. On Exhibit-17, what  
15 percentage of total opioid dosage in  
16 Summit County did you attribute to H.D.  
17 Smith?

18 A. .03 percent.

19 Q. And do you believe that  
20 number is accurate?

21 A. Yes.

22 Q. If you would, sir, I know  
23 you have your report in front of you  
24 there that's been previously marked as



1 Exhibit-3. I want to ask you some  
2 questions regarding that.

3 I know you've been asked a  
4 lot of questions over the last day  
5 and-a-half about the five methodologies  
6 that were utilized. I'm not going to ask  
7 you specifics about the methodologies,  
8 but I want to ask you some questions  
9 about specific numbers that you generated  
10 through those five different  
11 methodologies.

12 So if you could, please,  
13 turn to Table Number 24 in Exhibit-3,  
14 which is Page 59 of your report.

15 A. Yes.

16 Q. Now, this Table 24 relates  
17 to the trailing six-month maximum  
18 threshold flag transactions methodology,  
19 correct?

20 A. Correct.

21 Q. All right. And using that  
22 methodology, how many flagged  
23 transactions did you attribute to H.D.  
24 Smith for the period between 1996 and

1      2018?

2                    A.      269.

3                    Q.      And you believe that number  
4      is accurate?

5                    A.      Yes.

6                    Q.      If you could, sir, could you  
7      tell me what the percentage of the total  
8      flagged -- well, let me ask it this way:  
9      Total flagged transactions that you have  
10     in Table 24 for that time period for all  
11     of the identified companies you have as  
12     1,271,618; is that correct?

13                   A.      Yes.

14                   Q.      If you could, please, sir,  
15     could you tell me what percentage of that  
16     1,271,618 flagged transactions you've  
17     attributed to H.D. Smith?

18                             And I've handed you a  
19     calculator there, because I assume you  
20     can't do that one in your head.

21                   A.      Apparently, I can't do it on  
22     a calculator either. Just give me a  
23     minute.

24                             .02 percent.

1 Q. Does that sound accurate,  
2 sir?

3 A. Yes.

4 Q. If you would, please, turn  
5 to Table 26 in Exhibit-3. It's on Page  
6 63 of your report.

7 A. Yes.

8 Q. And this table relates to  
9 the twice trailing 12-month average  
10 pharmacy dosage units threshold  
11 methodology, correct?

12 A. Yes.

13 Q. Using that methodology in  
14 Table 26, sir, how many flagged  
15 transactions did you attribute to H.D.  
16 Smith for the period between 1996 and  
17 2018?

18 A. 355.

19 Q. All right. And you believe  
20 that number is accurate?

21 A. Yes.

22 Q. If you could, sir, and  
23 you've already anticipated my next  
24 question, could you tell me what the

1 percentage of the total flagged  
2 transactions, using the methodology on  
3 Table 26, that you've attributed to H.D.  
4 Smith?

5 A. Yes. It's .046 percent.

6 Q. And you believe that number  
7 is accurate?

8 A. Yes.

9 Q. If you could, please, sir,  
10 turn to Table 28 in Exhibit-3. This is  
11 on Page 67 of your report.

12 A. Yes.

13 Q. And Table 28 relates to the  
14 three times trailing 12-month average  
15 pharmacy dosage units methodology?

16 A. Yes.

17 Q. And in what's reflected in  
18 Table 28, utilizing that methodology,  
19 sir, how many flagged transactions did  
20 you attribute to H.D. Smith for the  
21 period between 1996 and 2018?

22 A. 311.

23 Q. And do you believe that  
24 number is accurate?

1           A.     At least for the subperiod  
2     that there is H.D. Smith data, yes.

3           Q.     Okay. You say "for the  
4     subperiod that there is H.D. Smith data."

5                     Why did you qualify that?

6           A.     Well, and perhaps I should  
7     have on some of the earlier ones.

8                     We don't have H.D. Smith  
9     data going back to 1996. So for whatever  
10    time period we have H.D. Smith data in  
11    this table, we identified 311  
12    transactions.

13                    And in total, across all of  
14    the distributors, some of which we have  
15    data going back into the late 1990s, or  
16    even 1996 for Cardinal Health, there's  
17    434,698 flagged transactions.

18                    So I just should have,  
19    perhaps, on your prior questions made  
20    clear that we're talking about how many  
21    flagged transactions we have for H.D.  
22    Smith. And it's not for all of that time  
23    period; it's for the part of that time  
24    period that we have H.D. Smith data.

1           Q.     And do you know, sitting  
2     here today, what time period you have  
3     data for, for H.D. Smith?

4           A.     We have it at least for the  
5     ARCOS time period, 2006 to 2014. I don't  
6     recall, as I sit here. Although we could  
7     look at a chart or a table that would  
8     tell us that, how much before or after we  
9     have.

10          Q.     Okay. Well, going back to  
11     your Table 28 in your report, you said  
12     for -- with your qualification for the  
13     time period that you have H.D. Smith  
14     data, you identified 311 flagged  
15     transactions for H.D. Smith; is that  
16     correct?

17          A.     Yes.

18          Q.     Of the total flagged  
19     transactions utilizing the methodology  
20     that's reflected in Table 28 on Page 67  
21     of your report, what percentage of the  
22     total flagged transactions are you  
23     attributing to H.D. Smith?

24          A.     .07 percent.

1           Q.     If you could, sir, please  
2     turn to Table 30 in Exhibit-3.  It's on  
3     Page 71 of your report.

4           A.     Yes.

5           Q.     And Table 30 reflects the  
6     maximum 8,000 dosage units monthly  
7     threshold methodology that we've talked  
8     about already, correct?

9           A.     Yes.

10          Q.     All right.  Utilizing that  
11     methodology, sir, how many flagged  
12     transactions did you attribute to H.D.  
13     Smith?

14          A.     308.

15          Q.     And you believe that number  
16     is accurate?

17          A.     Yes.

18          Q.     And you've already  
19     anticipated my next question.

20                 Using that number, the 308,  
21     sir, that -- you identified 713,969  
22     flagged transactions in Table 30.  What  
23     percentage of those total flagged  
24     transactions do you attribute to H.D.

1 Smith?

2 A. .04 percent.

3 Q. And you believe that number

4 is accurate?

5 A. Yes.

6 Q. If you would, sir, please

7 turn to Table 32 in Exhibit-3, which is

8 on Page 75 of your report.

9 A. Yes.

10 Q. And Table 32 reflects the

11 maximum daily dosage units threshold

12 methodology.

13 And utilizing that

14 methodology that's reflected in Table 32,

15 how many flagged transactions did you

16 attribute to H.D. Smith?

17 A. 352.

18 Q. All right. Now, you have a

19 total flagged transactions that you've

20 identified in Table 32, using that

21 methodology, as 1,225,867; is that

22 correct?

23 A. Yes.

24 Q. All right. First, do you



1 believe that the 352 flagged transactions  
2 that you attribute to H.D. Smith is  
3 accurate?

4 A. Yes.

5 Q. What percentage of the total  
6 flagged transactions, using the  
7 methodology that's reflected in Table 32,  
8 do you attribute to H.D. Smith?

9 A. .03 percent.

10 Q. Sir, I would just like to,  
11 if we could -- if we could quickly go  
12 through, in your report -- so those  
13 tables that we've just discussed all  
14 related to Cuyahoga County.

15 If I could just briefly go  
16 through relating to Summit County.

17 Let's start with Table 25.

18 A. Yes.

19 Q. And Table 25 on Page 60 of  
20 your report, that's Exhibit-3, that,  
21 again, relates to the trailing six-month  
22 maximum threshold methodology, correct?

23 A. Yes.

24 Q. What's the total number of

1     flagged transactions, using that  
2     methodology, that you identified for H.D.  
3     Smith?

4             A.     185.

5             Q.     And what's the percentage of  
6     the total flagged transactions that you  
7     had identified in Table 25 that you  
8     attribute to H.D. Smith?

9             A.     .02 percent.

10            Q.     If you would, sir, please  
11    turn to Table 27, which is on Page 64 of  
12    your report, Exhibit-3.

13                   And Table 27 relates to the  
14    twice trailing 12-month average pharmacy  
15    dosage units threshold methodology.

16                   How many flagged  
17    transactions, using that methodology,  
18    sir, did you attribute to H.D. Smith for  
19    Summit County?

20            A.     128.

21            Q.     All right. And, again, of  
22    the total flagged transactions that are  
23    reflected in Table Number 27, what is the  
24    percentage of flagged transactions that

1     you attribute to H.D. Smith?

2             A.     .02 percent.

3             Q.     And you believe that the 128  
4     number, flagged transactions, is  
5     accurate?

6             A.     Yes.

7             Q.     If you would, sir, please  
8     turn to Table 29 of your report, which is  
9     on Page 67.

10            A.     Yes.

11            Q.     I'm sorry, 68 --

12            A.     Yes.

13            Q.     -- of Exhibit-3.

14                    This relates to the three  
15     times trailing 12-month average pharmacy  
16     dosage units threshold for Summit County,  
17     correct?

18            A.     Yes.

19            Q.     And using that methodology,  
20     sir, how many flagged transactions did  
21     you attribute to H.D. Smith?

22            A.     114.

23            Q.     Do you believe that number  
24     is accurate, sir?

1 A. Yes.

2 Q. Of the total flagged  
3 transactions that you've identified in  
4 Table 29 of Exhibit-3, what is the  
5 percentage that you -- of those flagged  
6 transactions that you attribute to H.D.  
7 Smith?

8 A. .026 percent.

9 Q. If you would, please, sir,  
10 turn to Table 31 --

11 A. Yes.

12 Q. -- which is on Page 72 of  
13 your report.

14 A. Yes.

15 Q. This table relates to the  
16 maximum 8,000 dosage units methodology?

17 A. Yes.

18 Q. And in Table 31, sir, how  
19 many flagged transactions did you  
20 attribute to H.D. Smith?

21 A. None.

22 Q. Even I can do the percentage  
23 on that one without the calculator.

24 And then lastly, sir, if you

1     could, please, turn to Table 33.  It's on  
2     Page 76 of your report that's Exhibit-3.

3             A.     Yes.

4             Q.     This is the maximum daily  
5     dosage units threshold methodology,  
6     correct?

7             A.     Yes.

8             Q.     And the -- how many flagged  
9     transactions did you attribute to H.D.  
10    Smith in Table 33, sir?

11            A.     74.

12            Q.     And what is the percentage,  
13    based on the overall flagged transactions  
14    that you identified, that you attribute  
15    to H.D. Smith in Table 33?

16            A.     .009 percent.

17            Q.     And you believe that number  
18    of 74 flagged transactions is accurate?

19            A.     Yes.

20            Q.     If I could, just to clarify,  
21    on Table 31, do you believe that the zero  
22    flagged transactions is an accurate  
23    number?

24            A.     Yes.

1           Q.     And to summarize, you  
2     believe that all the numbers that I've  
3     asked you about, as they relate to H.D.  
4     Smith, that are reflected in your report  
5     in Exhibit-3, all the specific numbers  
6     I've asked you about are accurate?

7           A.     Yes.

8                     MR. HAHN:   That's all I  
9     have, sir.

10                    THE WITNESS:   Thank you.

11                    VIDEO TECHNICIAN:   Off the  
12     record at 1:29 p.m.

13                             -   -   -

14                             (Whereupon, a discussion off  
15     the record occurred.)

16                             -   -   -

17                    VIDEO TECHNICIAN:   We're  
18     back on the record at 1:31 p.m.

19                             -   -   -

20                             EXAMINATION

21                             -   -   -

22     BY MR. GALLAGHER:

23           Q.     Mr. McCann, good afternoon.  
24     My name is Rick Gallagher, I'm a lawyer

**MCCANN-3**

IN THE UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF OHIO  
EASTERN DIVISION

IN RE NATIONAL  
PRESCRIPTION OPIATE  
LITIGATION

: MDL No. 2804  
: CASE NO. 17-MD-2804  
: (DAP)  
:

EXPERT REPORT OF CRAIG J. MCCANN, PH.D., CFA  
March 25, 2019





Table 24 Trailing Six-Month Maximum Threshold Flagged Transactions,  
Cuyahoga County, OH 1996-2018

# of Flagged Transactions	Oxycodone	Hydrocodone	Morphine	Hydromorphone	Oxymorphone	Other	Total
AmerisourceBergen	99,137	49,339	14,957	2,874	545	11,597	178,449
Anda, Inc	700	1,723	0	2	0	69	2,494
Cardinal Health	192,799	94,450	26,389	3,061	3,974	30,020	350,693
CVS	n/a	109,055	n/a	n/a	n/a	8,772	117,827
Discount Drug Mart	n/a	32,583	0	n/a	n/a	3,229	35,812
H. D. Smith	269	0	0	0	0	0	269
HBC Service Co	4,909	41,114	0	0	0	1,275	47,298
Henry Schein Inc	n/a	n/a	n/a	n/a	n/a	n/a	n/a
McKesson Corp	129,021	89,263	9,185	759	538	6,265	235,031
Miami-Luken	0	0	0	0	n/a	0	0
Prescription Supply	5,008	489	1,220	134	0	40	6,891
Rite Aid	n/a	18,828	n/a	n/a	n/a	2,748	21,576
Walgreens	97,401	100,421	19,462	3,900	0	10,744	231,928
Wal-Mart	16,070	25,737	477	76	0	990	43,350
<b>Total</b>	<b>545,314</b>	<b>563,002</b>	<b>71,690</b>	<b>10,806</b>	<b>5,057</b>	<b>75,749</b>	<b>1,271,618</b>

Table 25 Trailing Six-Month Maximum Threshold Flagged Transactions, Summit County, OH 1996-2018

# of Flagged Transactions	Oxycodone	Hydrocodone	Morphine	Hydromorphone	Oxymorphone	Other	Total
AmerisourceBergen	77,175	52,681	21,289	6,341	2,830	10,804	171,120
Anda, Inc	690	1,302	121	2	0	188	2,303
Cardinal Health	111,200	50,300	24,731	5,707	2,638	13,065	207,641
CVS	n/a	45,927	n/a	n/a	n/a	2,624	48,551
Discount Drug Mart	n/a	8,500	0	n/a	n/a	720	9,220
H. D. Smith	60	125	0	n/a	0	0	185
HBC Service Co	2,682	26,651	0	0	0	703	30,036
Henry Schein Inc	n/a	n/a	n/a	n/a	n/a	n/a	n/a
McKesson Corp	96,172	64,409	20,338	5,156	4,116	6,280	196,471
Miami-Luken	2,999	1,308	391	0	236	0	4,934
Prescription Supply	16	4	0	0	0	0	20
Rite Aid	n/a	10,953	n/a	n/a	n/a	898	11,851
Walgreens	39,284	47,489	11,596	3,050	0	2,669	104,088
Wal-Mart	9,010	15,052	777	173	0	393	25,405
<b>Total</b>	<b>339,288</b>	<b>324,701</b>	<b>79,243</b>	<b>20,429</b>	<b>9,820</b>	<b>38,344</b>	<b>811,825</b>

### B. Twice Trailing Twelve-Month Average Pharmacy Dosage Units

136. I identify transactions that cause the number of dosage units shipped by a Distributor to a Pharmacy in a calendar month to exceed twice the trailing twelve-month average dosage units to retail and chain pharmacies served by the Distributor. I have been asked by Counsel to assume that the Distributor did not effectively investigate the flagged transactions and so every subsequent transaction of that drug code is also flagged because the Distributor had an unfulfilled obligation to detect and investigate the first flagged transaction.

Table 26 Twice Trailing Twelve-Month Average Pharmacy Dosage Units  
Threshold Flagged Transactions, Cuyahoga County, 1996-2018

# of Flagged Transactions	Oxycodone	Hydrocodone	Morphine	Hydromorphone	Oxymorphone	Other	Total
AmerisourceBergen	45,288	26,985	8,256	2,502	844	16,731	100,606
Anda, Inc	587	950	51	6	0	256	1,850
Cardinal Health	121,206	82,155	24,003	4,621	5,713	56,834	294,532
CVS	n/a	34,001	n/a	n/a	n/a	6,422	40,423
Discount Drug Mart	n/a	32,848	0	n/a	n/a	2,554	35,402
H. D. Smith	311	0	12	4	11	17	355
HBC Service Co	4,942	4,690	29	104	0	669	10,434
Henry Schein Inc	n/a	n/a	n/a	n/a	n/a	n/a	n/a
McKesson Corp	51,631	68,503	8,532	1,505	1,344	22,790	154,305
Miami-Luken	0	0	0	0	n/a	0	0
Prescription Supply	802	471	1,176	174	20	690	3,333
Rite Aid	n/a	4,145	n/a	n/a	n/a	1,452	5,597
Walgreens	42,801	18,937	15,801	5,665	30	22,409	105,643
Wal-Mart	8,469	806	494	117	0	1,357	11,243
<b>Total</b>	<b>276,037</b>	<b>274,491</b>	<b>58,354</b>	<b>14,698</b>	<b>7,962</b>	<b>132,181</b>	<b>763,723</b>

Table 27 Twice Trailing Twelve-Month Average Pharmacy Dosage Units Threshold Flagged Transactions, Summit County, OH 1996-2018

# of Flagged Transactions	Oxycodone	Hydrocodone	Morphine	Hydromorphone	Oxymorphone	Other	Total
AmerisourceBergen	41,408	48,241	17,443	6,140	3,737	22,741	139,710
Anda, Inc	1,081	1,245	221	22	0	325	2,894
Cardinal Health	84,118	48,828	27,703	7,966	4,458	35,525	208,598
CVS	n/a	27,081	n/a	n/a	n/a	1,443	28,524
Discount Drug Mart	n/a	7,405	0	n/a	n/a	533	7,938
H. D. Smith	0	105	0	n/a	0	23	128
HBC Service Co	2,025	16,692	200	28	22	491	19,458
Henry Schein Inc	n/a	n/a	n/a	n/a	n/a	n/a	n/a
McKesson Corp	64,582	62,291	20,257	6,303	5,538	24,320	183,291
Miami-Luken	2,939	1,222	452	88	304	388	5,393
Prescription Supply	0	4	0	1	0	0	5
Rite Aid	n/a	8,235	n/a	n/a	n/a	376	8,611
Walgreens	15,942	28,076	10,431	3,488	44	9,018	66,999
Wal-Mart	2,657	695	729	199	27	622	4,929
<b>Total</b>	<b>214,752</b>	<b>250,120</b>	<b>77,436</b>	<b>24,235</b>	<b>14,130</b>	<b>95,805</b>	<b>676,478</b>

### C. Three Times Trailing Twelve-Month Average Pharmacy Dosage Units

140. I identify transactions that cause the number of dosage units shipped by a Distributor to a Pharmacy in a calendar month to exceed three times the trailing twelve-month average dosage units to retail and chain pharmacies served by the Distributor. I have been asked by Counsel to assume that the Distributor did not effectively investigate the flagged transactions and so every subsequent transaction of that drug code is also flagged because the Distributor had an unfulfilled obligation to detect and investigate the first flagged transaction.

Table 28 Three Times Trailing Twelve-Month Average Pharmacy Dosage Units Threshold Flagged Transactions, Cuyahoga County, OH 1996-2018

# of Flagged Transactions	Oxycodone	Hydrocodone	Morphine	Hydromorphone	Oxymorphone	Other	Total
AmerisourceBergen	22,663	14,792	3,933	1,319	289	10,561	53,557
Anda, Inc	306	584	3	0	0	182	1,075
Cardinal Health	62,297	67,273	17,572	2,867	4,475	39,223	193,707
CVS	n/a	13,485	n/a	n/a	n/a	2,619	16,104
Discount Drug Mart	n/a	32,445	0	n/a	n/a	1,995	34,440
H. D. Smith	311	0	0	0	0	0	311
HBC Service Co	1,652	2,069	12	34	0	42	3,809
Henry Schein Inc	n/a	n/a	n/a	n/a	n/a	n/a	n/a
McKesson Corp	31,620	41,655	4,172	730	581	13,998	92,756
Miami-Luken	0	0	0	0	n/a	0	0
Prescription Supply	96	468	838	148	1	428	1,979
Rite Aid	n/a	2,631	n/a	n/a	n/a	719	3,350
Walgreens	909	4,490	9,292	3,753	9	11,522	29,975
Wal-Mart	3,239	0	177	69	0	150	3,635
<b>Total</b>	<b>123,093</b>	<b>179,892</b>	<b>35,999</b>	<b>8,920</b>	<b>5,355</b>	<b>81,439</b>	<b>434,698</b>

Table 29 Three Times Trailing Twelve-Month Average Pharmacy Dosage Units Threshold Flagged Transactions, Summit County, OH 1996-2018

# of Flagged Transactions	Oxycodone	Hydrocodone	Morphine	Hydromorphone	Oxymorphone	Other	Total
AmerisourceBergen	26,024	40,096	10,643	4,823	3,051	13,724	98,361
Anda, Inc	981	993	177	21	0	295	2,467
Cardinal Health	49,733	42,267	21,073	6,408	2,295	24,609	146,385
CVS	n/a	17,930	n/a	n/a	n/a	370	18,300
Discount Drug Mart	n/a	7,278	0	n/a	n/a	403	7,681
H. D. Smith	0	91	0	n/a	0	23	114
HBC Service Co	857	8,099	103	0	13	114	9,186
Henry Schein Inc	n/a	n/a	n/a	n/a	n/a	n/a	n/a
McKesson Corp	36,410	48,607	16,642	4,721	4,198	16,232	126,810
Miami-Luken	0	1,111	0	79	243	331	1,764
Prescription Supply	0	4	0	0	0	0	4
Rite Aid	n/a	2,062	n/a	n/a	n/a	129	2,191
Walgreens	0	6,712	6,788	2,491	44	4,516	20,551
Wal-Mart	1,403	0	713	173	0	131	2,420
<b>Total</b>	<b>115,408</b>	<b>175,250</b>	<b>56,139</b>	<b>18,716</b>	<b>9,844</b>	<b>60,877</b>	<b>436,234</b>

#### D. Maximum 8,000 Dosage Units Monthly

144. I identify transactions that cause the number of dosage units shipped by a Distributor to a Pharmacy in a calendar month to exceed 8,000 dosage units. I have been asked by Counsel to assume that the Distributor did not effectively investigate the flagged transactions and so every subsequent transaction of that drug code is also flagged because the Distributor had an unfulfilled obligation to detect and investigate the first flagged transaction.

145. Figure 17 illustrates total opioid shipments into Cuyahoga County from 1996 to 2018 from ARCOS Data for 2006 to 2014 and, to the extent I have Defendant transaction data for the periods before 2006 and after



Table 30 Maximum 8,000 Dosage Units Monthly Threshold Flagged Transactions, Cuyahoga County, OH 1996-2018

# of Flagged Transactions	Oxycodone	Hydrocodone	Morphine	Hydromorphone	Oxymorphone	Other	Total
AmerisourceBergen	94,012	27,456	949	0	0	1,187	123,604
Anda, Inc	17	55	0	0	0	0	72
Cardinal Health	110,826	48,016	2,102	0	0	1,731	162,675
CVS	n/a	63,845	n/a	n/a	n/a	0	63,845
Discount Drug Mart	n/a	20,875	0	n/a	n/a	0	20,875
H. D. Smith	308	0	0	0	0	0	308
HBC Service Co	3,992	28,758	0	0	0	0	32,750
Henry Schein Inc	n/a	n/a	n/a	n/a	n/a	n/a	n/a
McKesson Corp	77,402	31,364	0	0	0	0	108,766
Miami-Luken	0	0	0	0	n/a	0	0
Prescription Supply	3,312	0	0	0	0	0	3,312
Rite Aid	n/a	9,603	n/a	n/a	n/a	0	9,603
Walgreens	88,496	74,958	0	0	0	0	163,454
Wal-Mart	9,165	15,540	0	0	0	0	24,705
<b>Total</b>	<b>387,530</b>	<b>320,470</b>	<b>3,051</b>	<b>0</b>	<b>0</b>	<b>2,918</b>	<b>713,969</b>

Table 31 Maximum 8,000 Dosage Units Monthly Threshold Flagged Transactions, Summit County, OH 1996-2018

# of Flagged Transactions	Oxycodone	Hydrocodone	Morphine	Hydromorphone	Oxymorphone	Other	Total
AmerisourceBergen	68,640	50,724	3,831	1,071	2,265	0	126,531
Anda, Inc	811	25	109	0	0	0	945
Cardinal Health	80,037	31,077	3,214	927	748	570	116,573
CVS	n/a	46,272	n/a	n/a	n/a	0	46,272
Discount Drug Mart	n/a	6,299	0	n/a	n/a	0	6,299
H. D. Smith	0	0	0	n/a	0	0	0
HBC Service Co	2,107	25,874	0	0	0	0	27,981
Henry Schein Inc	n/a	n/a	n/a	n/a	n/a	n/a	n/a
McKesson Corp	78,847	44,278	4,036	1,050	0	0	128,211
Miami-Luken	3,180	0	0	0	0	0	3,180
Prescription Supply	0	0	0	0	0	0	0
Rite Aid	n/a	12,057	n/a	n/a	n/a	0	12,057
Walgreens	36,774	48,454	0	0	0	0	85,228
Wal-Mart	2,897	7,740	0	0	0	0	10,637
<b>Total</b>	<b>273,293</b>	<b>272,800</b>	<b>11,190</b>	<b>3,048</b>	<b>3,013</b>	<b>570</b>	<b>563,914</b>

### E. Maximum Daily Dosage Units

148. I identify transactions that cause the number of dosage units shipped by a Distributor to a Pharmacy in a day to exceed a number of dosage units that varies by drug type and within some drug types by formulation.<sup>55</sup> I have been asked by Counsel to assume that the Distributor did not effectively investigate the flagged transactions and so every subsequent transaction of that drug code is also flagged because the Distributor had an unfulfilled obligation to detect and investigate the first flagged transaction.

<sup>55</sup> Maximum Daily Dosage Units used as specified in CAH\_MDLPRIORPRO\_DEA07\_01384160



Table 32 Maximum Daily Dosage Units Threshold Flagged Transactions in Cuyahoga County, 1996-2018

# of Flagged Transactions	Oxycodone	Hydrocodone	Morphine	Hydromorphone	Oxymorphone	Other	Total
AmerisourceBergen	107,350	52,226	18,018	3,366	n/a	3,292	184,252
Anda, Inc	904	2,129	46	20	n/a	95	3,194
Cardinal Health	166,869	88,662	30,253	4,244	n/a	10,147	300,175
CVS	n/a	115,449	n/a	n/a	n/a	5,951	121,400
Discount Drug Mart	n/a	32,424	0	n/a	n/a	2,036	34,460
H. D. Smith	311	19	0	4	n/a	18	352
HBC Service Co	5,978	46,103	0	0	n/a	10	52,091
Henry Schein Inc	n/a	n/a	n/a	n/a	n/a	n/a	n/a
McKesson Corp	118,299	88,832	9,825	1,154	n/a	1,298	219,408
Miami-Luken	2	133	0	0	n/a	0	135
Prescription Supply	5,351	521	1,471	162	n/a	6	7,511
Rite Aid	n/a	21,291	n/a	n/a	n/a	1,343	22,634
Walgreens	97,777	107,036	21,923	3,733	n/a	6,949	237,418
Wal-Mart	14,593	26,963	818	76	n/a	387	42,837
<b>Total</b>	<b>517,434</b>	<b>581,788</b>	<b>82,354</b>	<b>12,759</b>	<b>n/a</b>	<b>31,532</b>	<b>1,225,867</b>

Table 33 Maximum Daily Dosage Units Threshold Flagged Transactions in Summit County, 1996-2018

# of Flagged Transactions	Oxycodone	Hydrocodone	Morphine	Hydromorphone	Oxymorphone	Other	Total
AmerisourceBergen	80,140	59,406	23,672	7,252	n/a	2,196	172,666
Anda, Inc	1,130	1,566	205	41	n/a	19	2,961
Cardinal Health	104,253	52,285	27,023	6,358	n/a	4,104	194,023
CVS	n/a	49,701	n/a	n/a	n/a	1,759	51,460
Discount Drug Mart	n/a	8,435	0	n/a	n/a	357	8,792
H. D. Smith	0	74	0	n/a	n/a	0	74
HBC Service Co	2,858	29,533	33	0	n/a	0	32,424
Henry Schein Inc	n/a	n/a	n/a	n/a	n/a	n/a	n/a
McKesson Corp	96,342	69,871	21,349	5,883	n/a	518	193,963
Miami-Luken	3,184	1,404	476	53	n/a	0	5,117
Prescription Supply	15	5	0	1	n/a	0	21
Rite Aid	n/a	12,512	n/a	n/a	n/a	177	12,689
Walgreens	40,192	50,679	12,257	3,059	n/a	353	106,540
Wal-Mart	7,411	14,905	1,013	169	n/a	96	23,594
<b>Total</b>	<b>335,525</b>	<b>350,376</b>	<b>86,028</b>	<b>22,816</b>	<b>n/a</b>	<b>9,579</b>	<b>804,324</b>

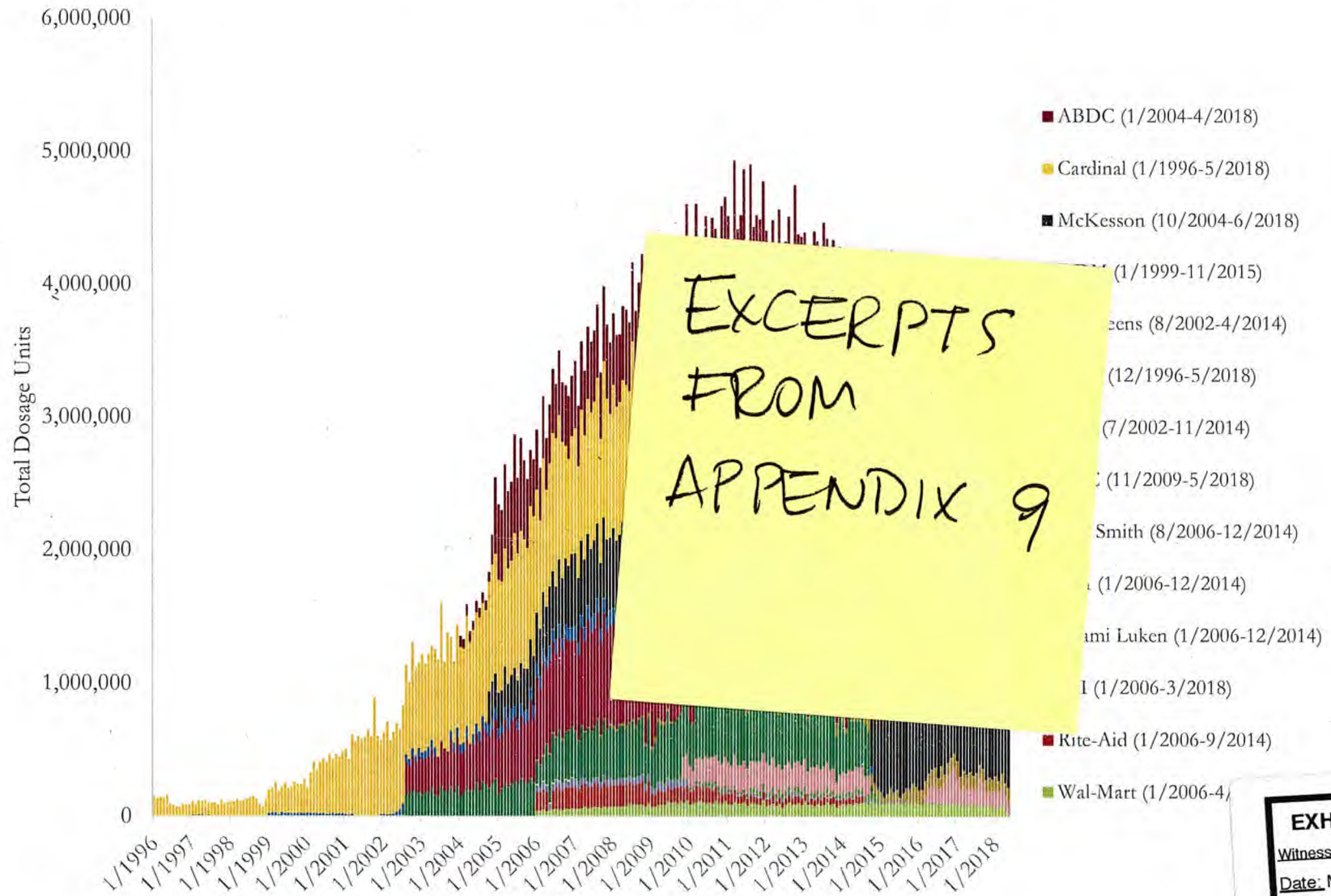
#### F. Additional Identification

152. I have been asked by Counsel to assume that Chain Distributors may have had knowledge of - or information available to inform them of - opioid shipments from all Distributors to the Chain Distributor's affiliated pharmacies. I have re-run the five identification routines described above assuming that the Chain Distributors could have flagged transactions based on this expanded information set and report the results for the Chain Distributors in Table 34 through Table 43 below. Additional charts and tables reflecting the result of applying methodologies below to each Chain Distributor are in Appendix 11.

**MCCANN-12**



## All Defendants 12 Opioid Drug Distribution into Cuyahoga County, OH 1996 - 2018



**EXHIBIT 012**  
 Witness: McCann  
 Date: May 10, 2019  
 Amanda Miller CRR

Data source: ARCOS (2006-2014) and defendant transactional data

12 opioid drugs include: Codeine, Dihydrocodeine, Fentanyl, Hydrocodone, Hydromorphone, Levorphanol, Meperidine, Morphine, Opium, Oxycodone, Oxymorphone, Tapentadol

March 2019

## State and County Opioid Total Dosage Units Market Share

Company Name	OH		Summit County	
	Market Share	Total Dosage Units	Market Share	Total Dosage Units
Cardinal Health	23.36%	1,181,793,824	21.46%	56,478,170
McKesson Corporation	15.22%	770,100,781	21.44%	56,430,209
AmerisourceBergen Drug	12.78%	646,772,027	21.19%	55,775,794
Walgreen Co	11.28%	570,655,520	13.70%	36,069,760
CVS	7.98%	403,542,780	9.04%	23,802,420
Wal-Mart	6.28%	317,672,790	2.05%	5,391,170
Kroger	5.90%	298,385,260	0.00%	0
Rite Aid	4.08%	206,362,720	3.22%	8,485,870
Omnicare Distribution Center LLC	2.03%	102,937,195	0.01%	13,600
Miami-Luken	1.69%	85,388,675	1.08%	2,848,475
HBC Service Company	1.45%	73,149,760	3.54%	9,316,960
Discount Drug Mart	1.44%	72,847,210	1.31%	3,441,010
H. D. Smith	1.42%	71,931,930	0.03%	68,145
Anda, Inc	0.87%	43,933,912	0.67%	1,758,265
Prescription Supply Inc	0.73%	37,115,447	0.01%	19,300
Eckerd Corporation	0.50%	25,343,330	0.90%	2,372,920
Frank W Kerr Inc	0.44%	22,494,736	0.00%	0
Value Drug Co	0.43%	21,667,568	0.00%	0
Meijer Distribution Inc #90	0.42%	21,352,305	0.00%	0
Quest Pharmaceuticals Inc	0.26%	13,380,565	0.00%	1,300
KeySource Medical	0.24%	12,040,100	0.01%	16,490
The Harvard Drug Group	0.20%	10,082,135	0.05%	131,600
Rochester Drug Co-Operative Inc	0.13%	6,694,640	0.00%	8,235
River City Pharma	0.13%	6,602,325	0.04%	94,990
Top Rx, Inc.	0.11%	5,361,970	0.00%	700
Capital Wholesale Drug & Co	0.09%	4,550,495	0.00%	2,500
Auburn Pharmaceutical	0.06%	3,254,400	0.08%	209,960
Advantage Logistics	0.06%	3,053,950	0.00%	0
Heartland Repack Services	0.06%	2,804,135	0.00%	0
Associated Pharmacies Inc	0.04%	1,928,585	0.01%	37,600
Henry Schein Inc	0.02%	1,119,015	0.03%	81,170
Safecor Health, LLC	0.02%	1,050,410	0.00%	0
Genetec Inc	0.02%	861,780	0.00%	2,100
Qualitest Pharmaceuticals	0.02%	802,310	0.00%	0
Amneal Pharmaceuticals LLC	0.02%	768,000	0.00%	0
Dispensing Solutions	0.01%	702,451	0.00%	4,440
Expert-Med	0.01%	692,420	0.00%	2,500
Smith Drug Company	0.01%	669,182	0.00%	0
Pharmacy Service Ctr Distr	0.01%	598,180	0.01%	21,205
DRx Pharmaceutical Consultants, Inc.	0.01%	532,527	0.01%	18,134
American Sales Company	0.01%	499,200	0.03%	87,600
Pharmacy Buying Association	0.01%	384,000	0.00%	0
Morris & Dickson Co	0.01%	370,070	0.00%	0
Richie Pharmacal	0.01%	354,340	0.00%	1,000
Physicians Pharmaceutical Corp	0.01%	333,340	0.00%	0
D & K Healthcare Resources	0.01%	327,092	0.00%	0
Actavis Pharma, Inc.	0.01%	275,900	0.00%	100
Prescript Pharmaceuticals	0.01%	275,870	0.00%	0
MWI Veterinary Supply	0.01%	274,410	0.00%	11,130
General Injectables & Vaccines, Inc	0.00%	250,900	0.00%	0



## Distributor Market Share by Year in Summit County, OH

		County Population	544,660	544,275	543,116	542,135	541,648	541,293	540,716	541,601	542,095
		Total Percentage	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Company Name	Market Share	Total Dosage Units	2006	2007	2008	2009	2010	2011	2012	2013	2014
Cardinal Health	21.46%	56,478,170	23.19%	22.37%	24.03%	26.09%	21.85%	16.51%	16.53%	19.58%	24.97%
McKesson Corporation	21.44%	56,430,209	15.11%	16.99%	21.70%	20.81%	15.31%	18.37%	20.07%	29.23%	34.19%
AmerisourceBergen Drug	21.19%	55,775,794	24.16%	23.30%	17.52%	14.92%	21.55%	23.70%	24.03%	20.92%	20.71%
Walgreen Co	13.70%	36,069,760	15.25%	15.03%	16.33%	17.26%	17.45%	17.16%	15.31%	7.75%	1.74%
CVS	9.04%	23,802,420	8.80%	9.69%	9.50%	9.96%	9.23%	9.36%	9.30%	8.90%	6.59%
HBC Service Company	3.54%	9,316,960	0.00%	0.00%	0.00%	0.89%	5.48%	6.29%	6.37%	5.96%	4.41%
Rite Aid	3.22%	8,485,870	5.74%	5.83%	5.67%	3.06%	0.08%	3.02%	2.82%	2.69%	1.56%
Wal-Mart	2.05%	5,391,170	2.10%	2.27%	2.45%	2.33%	2.12%	1.96%	1.68%	1.54%	2.13%
Discount Drug Mart	1.31%	3,441,010	1.34%	1.39%	1.38%	1.41%	1.31%	1.23%	1.17%	1.22%	1.37%
Miami-Luken	1.08%	2,848,475	0.79%	0.87%	0.92%	1.06%	1.26%	1.08%	1.25%	1.09%	1.28%
Eckerd Corporation	0.90%	2,372,920	0.00%	0.00%	0.00%	1.37%	3.99%	0.64%	0.54%	0.47%	0.53%
Anda, Inc	0.67%	1,758,265	2.61%	1.91%	0.17%	0.32%	0.19%	0.43%	0.63%	0.28%	0.13%
Auburn Pharmaceutical	0.08%	209,960	0.26%	0.01%	0.04%	0.03%	0.03%	0.06%	0.05%	0.15%	0.13%
The Harvard Drug Group	0.05%	131,600	0.00%	0.09%	0.11%	0.23%	0.01%	0.00%	0.01%	0.00%	0.00%
River City Pharma	0.04%	94,990	0.00%	0.00%	0.00%	0.08%	0.00%	0.02%	0.02%	0.08%	0.11%
American Sales Company	0.03%	87,600	0.39%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Henry Schein Inc	0.03%	81,170	0.07%	0.07%	0.05%	0.03%	0.02%	0.01%	0.01%	0.02%	0.02%
H. D. Smith	0.03%	68,145	0.00%	0.00%	0.00%	0.00%	0.03%	0.07%	0.10%	0.00%	0.00%
PD-Rx Pharmaceuticals Inc	0.02%	55,304	0.05%	0.06%	0.08%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%
Associated Pharmacies Inc	0.01%	37,600	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.06%	0.06%
Almac Clinical Services, Inc.	0.01%	25,390	0.00%	0.00%	0.00%	0.00%	0.01%	0.02%	0.03%	0.01%	0.00%
Pharmacy Service Ctr Distr	0.01%	21,205	0.01%	0.01%	0.01%	0.00%	0.01%	0.01%	0.01%	0.01%	0.00%
Prescription Supply Inc	0.01%	19,300	0.00%	0.00%	0.00%	0.03%	0.00%	0.00%	0.01%	0.02%	0.00%
DRx Pharmaceutical Consultants, Inc.	0.01%	18,134	0.04%	0.02%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
KeySource Medical	0.01%	16,490	0.00%	0.00%	0.01%	0.02%	0.03%	0.00%	0.00%	0.00%	0.00%
Diamond Pharmacy Services	0.01%	14,610	0.00%	0.00%	0.01%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%
Independent Pharmacy Cooperative	0.01%	13,910	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.05%
Omnicare Distribution Center LLC	0.01%	13,600	0.00%	0.00%	0.01%	0.00%	0.00%	0.01%	0.01%	0.01%	0.00%
MWI Veterinary Supply	0.00%	11,130	0.01%	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%	0.00%	0.00%
Darby Dental Supply, LLC	0.00%	8,800	0.01%	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Rochester Drug Co-Operative Inc	0.00%	8,235	0.00%	0.00%	0.00%	0.02%	0.00%	0.01%	0.00%	0.00%	0.00%
Columbus Serum Co	0.00%	7,100	0.01%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Moore Medical LLC	0.00%	6,700	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Amatheon Inc	0.00%	5,780	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
Patterson Logistics Services	0.00%	5,435	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%
Fisher Clinical Services Inc	0.00%	4,624	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Dispensing Solutions	0.00%	4,440	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
JOM Pharmaceutical Services, Inc.	0.00%	3,930	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%
Palmetto State Pharma.	0.00%	3,500	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Penn Veterinary Supply	0.00%	3,400	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
PSS World Medical Inc	0.00%	3,315	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Capital Wholesale Drug & Co	0.00%	2,500	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%

## State and County Opioid Total Dosage Units Market Share

Company Name	OH		Cuyahoga County	
	Market Share	Total Dosage Units	Market Share	Total Dosage Units
Cardinal Health	23.36%	1,181,793,824	23.07%	100,530,754
McKesson Corporation	15.22%	770,100,781	14.32%	62,375,571
AmerisourceBergen Drug	12.78%	646,772,027	22.11%	96,350,751
Walgreen Co	11.28%	570,655,520	17.02%	74,159,470
CVS	7.98%	403,542,780	9.61%	41,859,800
Wal-Mart	6.28%	317,672,790	2.17%	9,438,765
Kroger	5.90%	298,385,260	0.00%	0
Rite Aid	4.08%	206,362,720	2.32%	10,119,510
Omnicare Distribution Center LLC	2.03%	102,937,195	0.00%	0
Miami-Luken	1.69%	85,388,675	0.02%	72,985
HBC Service Company	1.45%	73,149,760	2.53%	11,008,220
Discount Drug Mart	1.44%	72,847,210	2.75%	11,981,350
H. D. Smith	1.42%	71,931,930	0.56%	2,431,410
Anda, Inc	0.87%	43,933,912	0.81%	3,511,080
Prescription Supply Inc	0.73%	37,115,447	0.68%	2,957,844
Eckerd Corporation	0.50%	25,343,330	1.17%	5,077,810
Frank W Kerr Inc	0.44%	22,494,736	0.00%	300
Value Drug Co	0.43%	21,667,568	0.01%	47,373
Meijer Distribution Inc #90	0.42%	21,352,305	0.00%	0
Quest Pharmaceuticals Inc	0.26%	13,380,565	0.02%	68,740
KeySource Medical	0.24%	12,040,100	0.11%	498,415
The Harvard Drug Group	0.20%	10,082,135	0.14%	599,885
Rochester Drug Co-Operative Inc	0.13%	6,694,640	0.00%	600
River City Pharma	0.13%	6,602,325	0.08%	366,805
Top Rx, Inc.	0.11%	5,361,970	0.01%	42,930
Capital Wholesale Drug & Co	0.09%	4,550,495	0.00%	21,400
Auburn Pharmaceutical	0.06%	3,254,400	0.00%	7,200
Advantage Logistics	0.06%	3,053,950	0.00%	0
Heartland Repack Services	0.06%	2,804,135	0.00%	0
Associated Pharmacies Inc	0.04%	1,928,585	0.00%	0
Henry Schein Inc	0.02%	1,119,015	0.05%	211,660
Safecor Health, LLC	0.02%	1,050,410	0.09%	382,201
Genetco Inc	0.02%	861,780	0.00%	0
Qualitest Pharmaceuticals	0.02%	802,310	0.00%	6,000
Amneal Pharmaceuticals LLC	0.02%	768,000	0.09%	390,000
Dispensing Solutions	0.01%	702,451	0.04%	164,990
Expert-Med	0.01%	692,420	0.00%	7,500
Smith Drug Company	0.01%	669,182	0.04%	169,002
Pharmacy Service Ctr Distr	0.01%	598,180	0.02%	71,235
DRx Pharmaceutical Consultants, Inc.	0.01%	532,527	0.01%	62,966
American Sales Company	0.01%	499,200	0.06%	240,200
Pharmacy Buying Association	0.01%	384,000	0.00%	0
Morris & Dickson Co	0.01%	370,070	0.00%	0
Richie Pharmacal	0.01%	354,340	0.00%	7,900
Physicians Pharmaceutical Corp	0.01%	333,340	0.00%	0
D & K Healthcare Resources	0.01%	327,092	0.00%	0
Actavis Pharma, Inc.	0.01%	275,900	0.00%	100
Prescript Pharmaceuticals	0.01%	275,870	0.00%	2,300
MWI Veterinary Supply	0.01%	274,410	0.00%	16,510
General Injectables & Vaccines, Inc	0.00%	250,900	0.01%	29,500



**MCCANN-14**



## Opioid Total MME by Company in Cuyahoga County, OH

		County Population	1,312,816	1,301,540	1,291,479	1,285,082	1,278,200	1,270,461	1,266,210	1,264,622	1,262,459
		Total MME	514,672,000	567,224,195	595,633,999	664,429,159	700,133,566	715,923,558	663,462,852	622,682,981	579,123,262
Company Name	Market Share	MME	2006	2007	2008	2009	2010	2011	2012	2013	2014
Cardinal Health	31.52%	1,772,506,417	211,558,384	226,171,859	231,753,919	252,864,538	203,528,654	192,162,304	166,465,391	164,037,825	123,963,544
AmerisourceBergen Drug	25.73%	1,446,867,175	74,341,574	89,417,108	93,430,832	112,487,542	183,416,748	195,494,791	182,084,787	244,368,414	271,825,378
Walgreen Co	16.01%	900,461,722	102,739,278	113,357,810	124,504,422	127,680,333	137,345,884	138,289,923	120,879,178	31,829,812	3,835,083
McKesson Corporation	15.27%	858,579,288	73,359,398	82,283,818	88,902,749	96,054,683	97,001,677	109,572,526	106,064,746	101,596,188	103,743,504
CVS	3.08%	173,363,979	15,250,631	18,711,487	19,561,480	20,950,439	20,865,975	22,003,043	21,976,135	20,512,535	13,532,253
Wal-Mart	1.28%	71,789,966	5,679,486	6,629,013	7,694,051	9,375,676	9,376,092	9,054,796	8,616,136	5,855,346	9,509,370
H. D. Smith	1.18%	66,166,989	89,745	117,604	243,688	4,871,771	14,211,080	9,852,110	14,279,640	11,165,625	11,335,725
Prescription Supply Inc	1.04%	58,441,306	13,734,295	11,283,779	10,684,735	11,633,735	1,510,935	2,535,165	2,751,589	1,931,653	2,375,420
Anda, Inc	0.89%	50,178,701	1,746,390	1,562,323	2,505,022	2,933,492	1,145,317	2,429,220	3,700,976	14,418,791	19,737,170
Discount Drug Mart	0.83%	46,893,714	4,264,887	4,919,559	4,964,080	5,606,245	5,607,325	5,580,369	5,472,090	5,306,869	5,172,289
Rite Aid	0.75%	42,375,835	6,876,206	8,220,480	7,830,624	5,406,939	4,953,934	2,931,133	2,442,396	2,393,685	1,320,437
HBC Service Company	0.75%	42,100,926	0	0	0	1,333,997	8,305,011	9,733,591	9,062,796	8,198,571	5,466,961
Eckerd Corporation	0.37%	20,985,763	0	0	0	2,196,444	2,757,281	4,621,879	4,601,969	4,392,040	2,416,150
KeySource Medical	0.25%	14,107,055	26,018	500,462	112,977	6,366,092	4,988,634	2,112,872	0	0	0
West-Ward Pharmaceutical Corp.	0.22%	12,310,225	0	0	0	0	0	3,145,250	8,200,802	944,621	19,552
Fagron Inc	0.17%	9,780,294	926,196	1,861,160	1,840,476	2,120,858	1,713,233	699,334	291,484	207,063	120,490
Hospira Worldwide LLC	0.12%	6,591,230	0	0	40,304	187,257	574,736	1,496,509	3,494,472	796,073	1,880
The Harvard Drug Group	0.06%	3,528,616	449,104	515,470	463,131	514,809	69,157	1,424,120	65,233	24,565	3,027
River City Pharma	0.05%	2,919,369	3,315	0	9,512	465,789	552,747	1,346,558	487,484	21,686	32,278
Henry Schein Inc	0.04%	2,093,698	159,333	144,199	135,264	107,329	144,866	279,383	335,320	233,058	554,945
Akorn, Inc.	0.04%	2,038,285	0	0	0	0	0	0	294,910	1,743,375	0
Smith Drug Company	0.03%	1,487,869	0	11,211	49,380	130,810	222,911	281,785	303,539	280,064	208,170
Amneal Pharmaceuticals LLC	0.02%	1,325,826	0	0	0	0	0	0	0	0	1,325,826
Safecor Health, LLC	0.02%	1,271,296	0	0	0	0	940	8,313	99,105	954,742	208,196
PSS World Medical Inc	0.02%	1,192,883	272,869	155,286	182,675	177,526	166,566	165,631	72,331	0	0
MWI Veterinary Supply	0.02%	1,111,976	0	303	1,438	5,089	38,094	103,960	149,815	137,021	676,257
American Sales Company	0.02%	1,077,349	1,077,349	0	0	0	0	0	0	0	0
Fisher Clinical Services Inc	0.02%	1,037,766	508,472	406,249	1,076	0	0	0	114,707	7,262	0
Baxter Healthcare Corp	0.02%	884,536	0	0	0	4,136	880,400	0	0	0	0
Value Drug Co	0.01%	807,273	0	0	0	0	0	0	0	0	807,273
Miami-Luken	0.01%	698,012	688,931	8,022	605	454	0	0	0	0	0
Dispensing Solutions	0.01%	627,327	0	0	0	73,819	121,720	178,985	153,224	99,579	0
Priority Healthcare	0.01%	589,832	82,314	49,854	56,395	70,750	66,897	58,183	74,062	61,760	69,617
Quest Pharmaceuticals Inc	0.01%	561,456	0	0	23,059	113,867	58,287	47,675	295,377	23,191	0
ACE Surgical Supply Co Inc	0.01%	468,215	77,500	75,500	78,700	74,575	76,706	67,876	11,043	240	6,075
Patterson Logistics Services	0.01%	401,155	0	0	0	0	3,951	10,865	13,497	137,010	235,833
Professional Vet Products	0.01%	394,428	41,880	84,063	102,853	110,434	55,197	0	0	0	0
Pharmacy Service Ctr Distr	0.01%	354,958	71,915	70,308	94,827	65,651	44,099	8,158	0	0	0
Almac Clinical Services, Inc.	0.01%	325,967	0	0	0	0	0	0	217,312	108,656	0
Darby Dental Supply, LLC	0.01%	322,080	220,726	27,575	40,893	14,530	7,265	5,585	908	2,724	1,874

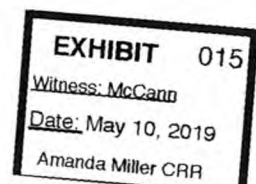
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## Opioid Total MME by Company in Summit County, OH

Company Name	Market Share	County Population Total MME	544,660	544,275	543,116	542,135	541,648	541,293	540,716	541,601	542,095
			367,366,660	400,893,335	382,352,016	419,131,994	472,731,914	474,030,643	447,468,100	420,702,314	367,150,422
		MME	2006	2007	2008	2009	2010	2011	2012	2013	2014
Cardinal Health	29.17%	1,094,306,610	109,945,174	120,729,880	134,595,363	166,421,419	142,185,012	109,793,985	98,636,285	102,858,116	109,141,375
AmerisourceBergen Drug	26.01%	975,859,370	104,837,042	112,001,944	73,707,661	59,918,202	125,431,261	147,929,274	145,576,933	124,639,357	81,817,697
McKesson Corporation	25.18%	944,639,007	64,615,079	75,326,267	92,025,606	100,767,249	99,622,867	112,858,772	109,216,034	144,592,405	145,614,728
Walgreen Co	10.77%	404,162,318	42,298,424	48,542,791	53,098,944	58,638,984	65,393,996	62,985,269	55,986,121	15,239,799	1,977,989
CVS	2.44%	91,634,443	7,735,298	9,648,482	9,957,458	11,317,292	11,277,436	12,074,340	11,639,009	10,619,296	7,365,832
Anda, Inc	1.27%	47,823,397	23,113,707	18,494,173	199,496	1,068,668	785,565	1,485,215	1,991,707	522,250	162,617
Miami-Juken	1.24%	46,541,721	2,874,541	2,981,400	4,170,946	5,686,830	7,165,433	6,459,756	6,137,244	5,441,691	5,623,880
Wal-Mart	1.12%	42,168,558	4,581,255	5,419,610	5,299,513	5,653,210	5,248,139	4,793,747	3,654,359	2,923,520	4,595,205
HBC Service Company	0.91%	34,241,388	0	0	0	985,080	6,273,857	7,638,028	7,568,525	6,949,840	4,826,058
Rite Aid	0.85%	32,036,395	4,786,038	5,616,594	5,748,119	3,409,806	93,330	3,800,833	3,548,284	3,274,880	1,758,510
Discount Drug Mart	0.33%	12,518,489	1,111,471	1,324,559	1,375,870	1,541,632	1,525,410	1,470,976	1,362,368	1,337,945	1,468,258
Eckerd Corporation	0.24%	9,021,990	0	0	0	1,563,573	4,772,779	805,493	672,011	588,840	619,295
KeySource Medical	0.08%	2,947,595	0	0	547,041	470,315	1,447,043	483,197	0	0	0
Amatheon Inc	0.07%	2,568,047	0	0	66,300	238,567	500,046	343,489	396,010	432,942	590,694
Auburn Pharmaceutical	0.04%	1,565,315	220,971	7,856	538,832	114,370	110,217	133,590	98,553	191,395	149,531
PSS World Medical Inc	0.03%	1,265,285	409,567	168,590	164,902	226,520	117,775	118,928	59,004	0	0
Henry Schein Inc	0.03%	1,256,372	76,936	83,178	68,980	51,467	85,483	66,428	90,974	102,214	630,712
Almac Clinical Services, Inc.	0.02%	761,726	112,320	0	0	0	64,838	173,100	293,332	90,972	27,164
The Harvard Drug Group	0.02%	710,056	605	104,511	238,548	304,484	23,232	15,845	15,438	605	6,787
H. D. Smith	0.01%	468,812	0	0	0	0	90,237	178,876	196,672	0	3,027
River City Pharma	0.01%	461,355	0	3,784	0	85,505	3,930	27,092	24,216	200,115	116,714
MWI Veterinary Supply	0.01%	443,562	4,238	3,330	2,292	1,800	43,133	133,576	87,509	81,618	86,066
Southern Anesthesia & Surgical, Inc.	0.01%	380,191	0	0	0	0	0	0	39,219	171,751	169,221
Priority Healthcare	0.01%	366,734	24,269	25,048	37,354	77,589	49,314	50,571	36,185	32,168	34,237
American Sales Company	0.01%	365,639	365,639	0	0	0	0	0	0	0	0
Butler Animal Health Supply	0.01%	358,824	22,137	22,083	35,832	234,314	44,458	0	0	0	0
Rochester Drug Co-Operative Inc	0.01%	269,151	1,788	22,694	152,611	82,070	2,421	7,568	0	0	0
Prescription Supply Inc	0.01%	264,716	2,252	143	0	63,907	42,696	1,278	27,038	120,691	6,711
PD-Rx Pharmaceuticals Inc	0.01%	246,467	40,955	73,996	102,040	28,454	0	0	0	1,022	0
Fisher Clinical Services Inc	0.01%	210,147	95,668	3,972	0	13,642	0	96,864	0	0	0
Patterson Logistics Services	0.00%	170,924	0	0	0	0	22,340	32,349	20,618	74,733	20,885
Expert-Med	0.00%	158,300	1,949	156,350	0	0	0	0	0	0	0
JOM Pharmaceutical Services, Inc.	0.00%	156,862	0	0	0	0	156,862	0	0	0	0
Midwest Veterinary Supply Inc	0.00%	155,446	303	605	286	0	0	0	303	50,876	103,073
Associated Pharmacies Inc	0.00%	140,530	0	0	0	0	0	0	143	75,783	64,604
Pharmacy Service Ctr Distr	0.00%	138,773	14,712	11,622	8,703	5,946	24,471	26,733	21,890	16,296	8,400
Independent Pharmacy Cooperative	0.00%	133,075	0	0	0	0	0	0	0	0	133,075
Fagron Inc	0.00%	117,493	0	0	60,540	56,400	0	553	0	0	0
Watson Pharma Inc	0.00%	90,000	0	0	90,000	0	0	0	0	0	0
Medisca Inc.	0.00%	76,730	0	15,135	0	0	15,135	0	0	39,673	6,787
DRx Pharmaceutical Consultants, Inc.	0.00%	60,199	34,045	15,007	9,548	1,598	0	0	0	0	0
Smith Medical Partners LLC	0.00%	53,196	0	0	0	0	53,196	0	0	0	0
Darby Dental Supply, LLC	0.00%	52,034	7,357	6,811	3,632	9,081	6,659	6,054	4,238	4,843	3,359



**MCCANN-16**

## Opioid Total Dosage Units by Company in Cuyahoga County, OH

		County Population	1,312,816	1,301,540	1,291,479	1,285,082	1,278,200	1,270,461	1,266,210	1,264,622	1,262,459
		Total Dosage Units	37,603,976	42,134,648	45,520,023	50,063,789	52,553,390	55,504,213	53,027,680	50,879,094	48,415,782
Company Name	Market Share	Total Dosage Units	2006	2007	2008	2009	2010	2011	2012	2013	2014
Cardinal Health	23.07%	100,530,754	11,456,136	12,083,744	12,735,624	13,500,846	11,629,054	10,459,812	9,693,602	10,156,709	8,815,227
AmerisourceBergen Drug	22.11%	96,350,751	5,379,970	6,322,476	6,611,595	7,566,230	11,211,446	11,963,171	11,874,145	15,665,292	19,756,426
Walgreen Co	17.02%	74,159,470	7,797,545	8,390,005	9,271,285	10,154,030	10,892,180	11,763,855	10,249,335	4,741,915	899,320
McKesson Corporation	14.32%	62,375,571	4,554,354	5,775,078	6,936,936	7,335,571	6,098,059	7,764,769	8,001,665	7,675,533	8,233,606
CVS	9.61%	41,859,800	3,607,600	4,480,400	4,666,100	5,009,400	5,013,800	5,363,800	5,379,400	4,991,900	3,347,400
Discount Drug Mart	2.75%	11,981,350	1,059,900	1,237,900	1,273,000	1,426,420	1,445,800	1,436,350	1,418,750	1,384,620	1,298,610
HBC Service Company	2.53%	11,008,220	0	0	0	345,720	2,187,700	2,554,850	2,384,350	2,110,400	1,425,200
Rite Aid	2.32%	10,119,510	1,646,000	1,962,100	1,894,200	1,264,220	1,162,350	718,190	590,150	565,500	316,800
Wal-Mart	2.17%	9,438,765	636,615	822,675	1,031,505	1,207,630	1,286,300	1,232,700	1,109,690	881,005	1,230,645
Eckerd Corporation	1.17%	5,077,810	0	0	0	553,820	687,320	1,119,820	1,114,130	1,032,080	570,640
Anda, Inc	0.81%	3,511,080	174,550	173,585	236,145	276,540	87,295	268,460	284,630	721,160	1,288,715
Prescription Supply Inc	0.68%	2,957,844	617,806	566,349	548,848	606,151	85,565	138,754	175,439	98,982	119,950
H. D. Smith	0.56%	2,431,410	21,100	21,850	28,273	199,648	386,405	323,894	490,089	447,963	512,188
The Harvard Drug Group	0.14%	599,885	126,800	147,800	119,200	130,675	16,405	34,605	17,600	6,800	0
KeySource Medical	0.11%	498,415	7,000	27,890	29,300	231,665	152,440	50,120	0	0	0
Amneal Pharmaceuticals LLC	0.09%	390,000	0	0	0	0	0	0	0	0	390,000
Safecor Health, LLC	0.09%	382,201	0	0	0	0	0	99	28,691	290,074	63,337
River City Pharma	0.08%	366,805	1,000	0	2,500	94,700	64,805	145,100	51,700	2,800	4,200
American Sales Company	0.06%	240,200	240,200	0	0	0	0	0	0	0	0
Henry Schein Inc	0.05%	211,660	36,245	27,160	28,700	23,430	14,170	30,425	22,400	16,240	12,890
Smith Drug Company	0.04%	169,002	0	2,000	10,300	22,520	33,502	31,600	25,205	27,535	16,340
Dispensing Solutions	0.04%	164,990	0	0	0	19,825	32,790	47,325	40,260	24,790	0
Miami-Luken	0.02%	72,985	71,185	1,600	100	100	0	0	0	0	0
Pharmacy Service Ctr Distr	0.02%	71,235	16,605	13,700	13,815	13,815	11,900	1,400	0	0	0
Quest Pharmaceuticals Inc	0.02%	68,740	0	0	4,900	15,700	4,520	10,000	30,115	3,505	0
Darby Dental Supply, LLC	0.02%	68,500	47,900	6,000	8,100	2,400	2,000	1,000	200	500	400
DRx Pharmaceutical Consultants, Ir	0.01%	62,966	20,409	17,382	16,035	9,140	0	0	0	0	0
Value Drug Co	0.01%	47,373	0	0	0	0	0	0	0	0	47,373
Top Rx, Inc.	0.01%	42,930	2,000	2,500	5,200	8,030	2,000	10,700	10,500	1,000	1,000
Rebel Distributors Corp	0.01%	34,585	7,630	3,200	8,345	5,230	4,905	3,495	1,780	0	0
Moore Medical LLC	0.01%	34,024	6,400	3,600	0	6,200	5,500	5,700	3,224	2,000	1,400
PSS World Medical Inc	0.01%	32,240	5,725	6,910	6,205	4,900	4,200	3,000	1,300	0	0
PD-Rx Pharmaceuticals Inc	0.01%	30,560	0	0	0	0	0	0	0	3,200	27,360
General Injectables & Vaccines,Inc	0.01%	29,500	6,400	7,300	8,500	7,300	0	0	0	0	0
A F Hauser, Inc	0.01%	25,500	3,600	6,800	7,200	100	0	100	2,000	3,200	2,500
Capital Wholesale Drug & Co	0.00%	21,400	0	1,000	3,000	500	0	0	0	2,000	14,900
Professional Veterinary	0.00%	16,900	700	3,400	6,000	5,100	1,700	0	0	0	0
MWI Veterinary Supply	0.00%	16,510	0	100	100	1,400	2,380	3,730	3,790	2,645	2,365
Columbus Serum Co	0.00%	15,800	8,100	6,000	0	1,600	100	0	0	0	0
Midwest Veterinary Supply Inc	0.00%	15,510	2,000	1,400	0	0	500	4,045	2,565	2,200	2,800

EXHIBIT 016

Witness: McCann

Date: May 10, 2019

Amanda Miller CRR



## Opioid Total Dosage Units by Company in Cuyahoga County, OH

		County Population	1,312,816	1,301,540	1,291,479	1,285,082	1,278,200	1,270,461	1,266,210	1,264,622	1,262,459
		Total Dosage Units	37,603,976	42,134,648	45,520,023	50,063,789	52,553,390	55,504,213	53,027,680	50,879,094	48,415,782
Company Name	Market Share	Total Dosage Units	2006	2007	2008	2009	2010	2011	2012	2013	2014
Patterson Logistics Services	0.00%	15,090	0	0	0	0	605	3,400	725	4,135	6,225
Hawthorn Pharmaceuticals Inc	0.00%	12,950	0	0	0	2,030	7,810	20	3,070	20	0
Priority Healthcare	0.00%	12,500	6,400	500	1,400	1,200	500	800	800	800	100
SAJ Distributors	0.00%	9,000	0	0	0	100	8,900	0	0	0	0
Almac Clinical Services, Inc.	0.00%	8,880	0	0	0	0	0	0	5,920	2,960	0
Richie Pharmacal	0.00%	7,900	3,700	100	0	4,000	100	0	0	0	0
Expert-Med	0.00%	7,500	7,500	0	0	0	0	0	0	0	0
Penn Veterinary Supply	0.00%	7,400	400	2,100	300	1,300	800	300	600	800	800
Auburn Pharmaceutical	0.00%	7,200	0	0	0	0	2,400	4,800	0	0	0
Qualitest Pharmaceuticals	0.00%	6,000	3,000	3,000	0	0	0	0	0	0	0
Fisher Clinical Services Inc	0.00%	5,640	1,600	0	160	0	0	0	3,340	540	0
HPSRx Enterprises Inc	0.00%	5,500	2,500	0	0	0	0	1,000	2,000	0	0
Professional Vet Products	0.00%	5,385	3,865	490	240	290	500	0	0	0	0
Butler Animal Health Supply	0.00%	5,015	3,790	930	30	40	225	0	0	0	0
Pamlab	0.00%	4,845	4,845	0	0	0	0	0	0	0	0
Cedardale Distributors LLC, DBA C	0.00%	4,700	0	0	0	0	0	0	0	0	4,700
Benco Dental Supply Co	0.00%	4,605	30	180	1,270	2,430	105	90	500	0	0
Pharmaceutical Systems	0.00%	3,600	300	600	600	200	400	500	200	400	400
Lake Erie Medical	0.00%	3,500	0	0	0	0	0	0	0	3,500	0
Leitner Pharmaceuticals	0.00%	3,132	1,376	1,756	0	0	0	0	0	0	0
Southern Anesthesia & Surgical, Inc	0.00%	3,100	0	0	0	0	0	0	500	2,100	500
HSB Veterinary Supplies Inc	0.00%	2,637	0	0	25	5	10	415	1,982	200	0
American Health Service Sales	0.00%	2,500	0	0	0	0	500	500	500	1,000	0
Prescript Pharmaceuticals	0.00%	2,300	240	600	480	240	0	300	200	120	120
Amatheon Inc	0.00%	2,270	0	0	0	0	0	200	400	625	1,045
Patterson Veterinary Supply Inc	0.00%	2,120	0	20	0	0	1,400	700	0	0	0
Diversified Health Care	0.00%	1,920	1,920	0	0	0	0	0	0	0	0
DIT Healthcare Distributio	0.00%	1,500	0	0	1,500	0	0	0	0	0	0
Par Pharmaceutical, Inc.	0.00%	1,500	0	0	1,500	0	0	0	0	0	0
National Logistics Services	0.00%	1,405	405	835	15	50	100	0	0	0	0
Diamond Pharmacy Services	0.00%	1,080	0	600	480	0	0	0	0	0	0
Northwind Pharmaceuticals, LLC	0.00%	900	0	0	300	300	300	0	0	0	0
Stat Rx USA LLC	0.00%	900	0	0	0	0	900	0	0	0	0
Publicis Selling Solutions, Inc. DBA	0.00%	744	0	0	76	280	344	44	0	0	0
JOM Pharmaceutical Services, Inc.	0.00%	618	0	0	0	618	0	0	0	0	0
Rochester Drug Co-Operative Inc	0.00%	600	0	600	0	0	0	0	0	0	0
Edwards Medical Supply	0.00%	450	50	100	300	0	0	0	0	0	0
ASD Specialty Healthcare LLC	0.00%	400	0	0	0	0	0	100	0	200	100
Dohmen Life Science Services, LLC	0.00%	400	0	0	0	0	400	0	0	0	0
UPM Pharmaceuticals, Inc.	0.00%	336	0	0	336	0	0	0	0	0	0

CONFIDENTIAL – SUBJECT TO PROTECTIVE ORDER

Opioid Total Dosage Units by Company in Cuyahoga County, OH

		County Population	1,312,816	1,301,540	1,291,479	1,285,082	1,278,200	1,270,461	1,266,210	1,264,622	1,262,459
		Total Dosage Units	37,603,976	42,134,648	45,520,023	50,063,789	52,553,390	55,504,213	53,027,680	50,879,094	48,415,782
Company Name	Market Share	Total Dosage Units	2006	2007	2008	2009	2010	2011	2012	2013	2014
Allscripts, LLC	0.00%	304	84	220	0	0	0	0	0	0	0
Frank W Kerr Inc	0.00%	300	0	0	0	0	0	0	0	100	200
Atley Pharmaceuticals	0.00%	288	288	0	0	0	0	0	0	0	0
Eye Care and Cure Corporation	0.00%	200	0	0	0	100	0	100	0	0	0
Wraser Pharmaceuticals	0.00%	123	0	0	0	50	0	73	0	0	0
Athlon Pharmaceuticals Inc	0.00%	121	108	13	0	0	0	0	0	0	0
Actavis Pharma, Inc.	0.00%	100	0	0	0	0	0	0	100	0	0
Phoenix Marketing Group	0.00%	100	100	0	0	0	0	0	0	0	0
Prescription Containers, Inc	0.00%	100	0	100	0	0	0	0	0	0	0
Smith Medical Partners LLC	0.00%	100	0	0	0	0	0	0	100	0	0
Altura Pharmaceuticals, Inc	0.00%	60	0	0	0	0	0	0	30	30	0
ECR Pharmaceuticals Co, Inc	0.00%	26	0	0	0	0	0	2	8	16	0

**MCCANN-17**



CONFIDENTIAL - SUBJECT TO PROTECTIVE ORDER

Opioid Total Dosage Units by Company in Summit County, OH

County Population			544,660	544,275	543,116	542,135	541,648	541,293	540,716	541,601	542,095
Total Dosage Units			22,554,858	25,912,698	26,980,193	29,797,825	31,878,533	33,259,512	32,594,363	31,287,949	28,923,351
Company Name	Market Share	Total Dosage Units	2006	2007	2008	2009	2010	2011	2012	2013	2014
Cardinal Health	21.46%	56,478,170	5,230,466	5,797,309	6,482,471	7,773,419	6,965,901	5,492,320	5,388,940	6,125,719	7,221,625
McKesson Corporation	21.44%	56,430,209	3,408,414	4,401,775	5,855,183	6,201,152	4,880,650	6,108,391	6,541,002	9,144,992	9,888,650
AmerisourceBergen Drug	21.19%	55,775,794	5,449,339	6,038,438	4,727,170	4,445,115	6,869,316	7,881,370	7,831,322	6,544,288	5,989,436
Walgreen Co	13.70%	36,069,760	3,438,905	3,895,230	4,404,970	5,141,710	5,561,665	5,708,145	4,991,405	2,424,840	502,890
CVS	9.04%	23,802,420	1,985,120	2,510,500	2,562,500	2,967,600	2,941,600	3,114,000	3,031,600	2,784,700	1,904,800
HBC Service Company	3.54%	9,316,960	0	0	0	264,380	1,745,420	2,091,450	2,076,320	1,863,890	1,275,500
Rite Aid	3.22%	8,485,870	1,293,600	1,510,400	1,528,840	911,180	25,400	1,004,010	917,840	842,110	452,490
Wal-Mart	2.05%	5,391,170	474,320	588,435	659,675	694,805	677,185	652,785	547,405	480,620	615,940
Discount Drug Mart	1.31%	3,441,010	302,700	360,500	373,230	419,930	417,260	407,600	382,270	382,300	395,220
Miami-Luken	1.08%	2,848,475	177,775	226,170	248,570	315,035	400,755	360,450	407,740	341,310	370,670
Eckerd Corporation	0.90%	2,372,920	0	0	0	408,900	1,271,010	213,970	176,740	148,230	154,070
Anda, Inc	0.67%	1,758,265	589,335	495,515	46,000	94,140	59,115	143,410	206,450	86,800	37,500
Auburn Pharmaceutical	0.08%	209,960	59,000	1,500	11,960	9,100	8,770	18,910	16,260	48,000	36,460
The Harvard Drug Group	0.05%	131,600	100	24,100	28,680	68,620	4,600	700	4,600	200	0
River City Pharma	0.04%	94,990	0	1,000	0	23,400	500	7,300	6,500	24,900	31,390
American Sales Company	0.03%	87,600	87,600	0	0	0	0	0	0	0	0
Henry Schein Inc	0.03%	81,170	16,000	18,000	13,700	9,700	5,355	4,255	4,795	4,945	4,420
H. D. Smith	0.03%	68,145	0	0	0	0	11,140	23,405	33,100	0	500
PD-Rx Pharmaceuticals Inc	0.02%	55,304	11,990	16,309	20,380	6,400	0	0	0	225	0
Associated Pharmacies Inc	0.01%	37,600	0	0	0	0	0	0	0	19,900	17,700
Almae Clinical Services, Inc.	0.01%	25,390	1,080	0	0	0	3,740	8,020	9,500	2,310	740
Pharmacy Service Ctr Distr	0.01%	21,205	2,305	3,300	1,400	1,100	2,800	3,200	3,000	2,800	1,300
Prescription Supply Inc	0.01%	19,300	400	0	0	10,000	1,000	300	2,300	4,700	600
DRx Pharmaceutical Consultants, Inc.	0.01%	18,134	9,622	4,864	3,120	528	0	0	0	0	0
KeySource Medical	0.01%	16,490	0	0	1,880	5,275	8,320	1,015	0	0	0
Diamond Pharmacy Services	0.01%	14,610	0	0	2,190	5,220	2,430	1,680	1,590	870	630
Independent Pharmacy Cooperative	0.01%	13,910	0	0	0	0	0	0	0	0	13,910
Omnicare Distribution Center LLC	0.01%	13,600	600	100	1,400	1,200	700	2,800	3,100	2,600	1,100
MWI Veterinary Supply	0.00%	11,130	1,400	1,100	0	500	1,320	2,205	2,935	910	760
Darby Dental Supply, LLC	0.00%	8,800	1,300	1,200	600	1,500	1,100	1,000	700	800	600
Rochester Drug Co-Operative Inc	0.00%	8,235	100	120	965	5,050	0	2,000	0	0	0
Columbus Serum Co	0.00%	7,100	2,800	4,000	0	200	100	0	0	0	0
Moore Medical LLC	0.00%	6,700	300	200	100	1,100	1,300	1,100	1,100	1,000	500
Amatheon Inc	0.00%	5,780	0	0	225	2,070	870	505	635	645	830
Patterson Logistics Services	0.00%	5,435	0	0	0	0	300	1,200	700	1,715	1,520
Fisher Clinical Services Inc	0.00%	4,624	3,360	120	0	1,144	0	0	0	0	0
Dispensing Solutions	0.00%	4,440	0	0	1,080	648	1,200	1,056	456	0	0
JOM Pharmaceutical Services, Inc.	0.00%	3,930	0	0	0	0	3,930	0	0	0	0
Palmetto State Pharma.	0.00%	3,500	0	3,500	0	0	0	0	0	0	0
Penn Veterinary Supply	0.00%	3,400	700	200	100	600	100	0	0	600	1,100
PSS World Medical Inc	0.00%	3,315	435	1,505	220	545	390	110	110	0	0
Capital Wholesale Drug & Co	0.00%	2,500	0	0	0	0	0	0	2,500	0	0
Expert-Med	0.00%	2,500	500	2,000	0	0	0	0	0	0	0

**EXHIBIT 017**  
Witness: McCann  
Date: May 10, 2019  
Amanda Miller CRR